

April 29, 2022

**Virginia Coastal Zone Management Program
Semiannual Section B.2-4 Report
For the Period from October 1, 2021 – March 31, 2022**

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SECTION B.2 PERMIT ADMINISTRATION, MONITORING AND ENFORCEMENT

1) DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ)

a) DEQ – Virginia Coastal Zone Management Program

Virginia CZM Program staff continued to work with our partner agencies to implement the Program over the last 6 months. For a full description of staff activities, please refer to the Section A report for Task 1.01.

b) DEQ – Water Permitting Programs

DEQ- Virginia Water Protection Permit (VWPP) Program

The Virginia Water Protection (VWP) Permit Program authorizes surface water withdrawal activities¹ and activities in wetlands and surface waters that may or may not require a Clean Water Act Section 401 Water Quality certification. In addition to the permit processing and wetlands impact data for the *Tidewater region* of the Commonwealth, this narrative highlights any challenges encountered during the reporting period.

During the reporting period of October 1, 2021 to March 31, 2022, the VWP Permit Program issued eight individual permits and 85 general permit coverages; processed 26 Notices of Planned Change on general permit coverages; and 10 individual permit modifications. For the purposes of this report, no permit application denials, withdrawals, or waivers were included.

The average time to process a general permit coverage was 19 days, and the average time to process an individual permit was 107 days.

Approximately 60 acres of non-tidal wetland impacts, and no tidal impacts, occurred during the reporting period. During this reporting period, approximately 108 wetland credits were purchased at compensatory mitigation banks or through in-lieu fee programs; approximately 6 acres of wetlands were created on project site(s); approximately 0.15 of an acre was enhanced on site(s); and approximately 2 acres were preserved on site(s).

During the reporting period, seven compliance actions² on individual permits and 25 compliance actions on general permit coverages were taken. Compliance actions for five of the individual permits and eight of the general permit coverages are still active. Additionally, seven compliance actions were taken on activities not associated with a VWP individual permit or general permit coverage, and one of these is still active. During this period, 262 compliance inspections took place.

The VWP Permit Program did not receive comments or concerns about expediting decision-making for the management of coastal resources. Seeking ways to expedite decision-making across the Commonwealth continues in the wake of several federal rulemakings³ taken during 2019 to 2021 – rules that are changing again at the time of this report. Of note, a statewide Permit Evaluation & Enhancement Program (PEEP) is

¹ While VWP permits may authorize surface water withdrawal activities, data specific to streams, stream flow, or water quantity are not included in this program summary.

² Warning Letter (WL) or Notice of Violation (NOV), or Request for Corrective Action (RCA).

³ Navigable Water Protection Rule, the Clean Water Act Section 401 Certification Rule, and the USACE Reissuance and Modification of Nationwide Permits Rule.

being planned and implemented, first at the Virginia Department of Environmental Quality, then in other agencies of the Secretariat of Natural Resources, to improve environmental permitting programs.

DEQ – Virginia Pollution Abatement (VPA) Water Permitting Program

The Virginia Pollution Abatement permit (VPA) is required for facilities that manage wastewater, animal waste, biosolids or industrial residuals in such a manner that they do not have a discharge from the site. For example, an agricultural facility that temporarily stores wastewater to be land applied as part of an irrigation/fertilization program.

During the period between October 1, 2021 and March 31, 2022, two permit application were received for VPA – Individual Permits (IP). One application was for the issuance of a VPA IP for land treatment of wastewater, one for the reissuance of a VPA IP for the land application of biosolids, both within the Coastal Zone. Both of the permit applications are pending issuance. Four additional permit actions were completed, and the permits signed during this period – three were reissuances of permits that authorize the land application of biosolids; one was a reissuance of a permit that authorizes the distribution and marketing of Exceptional Quality Biosolids Compost. The permit applications for each of the permit actions were submitted prior to this reporting period. In addition to the one application received for permit reissuance, there are 14 permit applications for reissuance pending from previous reporting periods.

During the period between October 1, 2021 and March 31, 2022, two application were received seeking coverage under the VPA General Permit for Poultry Waste Management (PWM) for farms located in the Coastal Zone Management area. One of the permits was issued during the reporting period, the other is pending. No PWM general permits were reissued during that period. For PWM general permits: four permit changes were processed for change of ownership during the reporting period. No applications were received for coverage under the Animal Feeding Operations general permit, but one was received and processed for change of ownership.

DEQ – Virginia Pollution Discharge Elimination System (VPDES) Water Permitting Program

There are a total of 284 individual municipal and industrial CZM area VPDES individual permits. This includes 12 Municipal Separate Storm Sewer (MS4) individual permits. This number and the numbers in the table represent typical activity in the program. The increase in pending permits from the last report is partially due to workload and staffing issues. Also, many of the pending permits are large and complicated facilities (power plants, shipyards, military installations and MS4 permits) that require longer time periods to reissue.

There are also numerous facilities registered under general permits in CZM areas including 56 vehicle wash, 106 concrete products, 10 cooling water, 313 domestic sewage $\leq 1,000$ GPD, 59 nonmetallic mineral mining, 27 petroleum, 15 potable water treatment, 43 seafood processors, and 517 industrial stormwater. These represent typical numbers for permit registrants in CZM areas in Virginia. There are also 63 registrants under the MS4 general permit. There are a number of general permit coverages that are automatically covered under a permit (e.g., pesticide applications and hydrostatic testing) and are not entered into the CEDS database. There are also 63 registrants under the nutrient trading general permit but these facilities are included in the individual permit count.

VPDES/VPA - October 1, 2021 – March 31, 2022*										
	Permits Issued / Avg Proc. Days ⁽¹⁾		Permits Reissued / Avg Proc. Days		Permits Modified** / Avg Proc. Days		Denied / Avg Proc. Days		Permits Reissue Pending / Avg Proc. Days	
VPDES	0	NA	13	458	5	226	0	NA	59***	NA
VPA	0	NA	4	648	0	NA	0	NA	15	749
VPA GP	1	62	0	NA	5	10	0	NA	0	NA

Processing day is the amount of time between receiving a complete application and making the final case decision (issuance, reissuance, modification, etc.).

* Information from CEDS (Comprehensive Environmental Data System) database

** Major modifications

*** This represents existing VPDES individual permits expired but pending through March 31, 2022.

c) DEQ – Water Program Enforcement and Compliance

DEQ continues to apply both informal and formal enforcement measures in the enforcement program. Reference Table 1, below.

Informal measures, such as Warning Letters and Letters of Agreement, are used in those cases where non-compliance is not significant in nature and where compliance can be achieved in a short period of time. For the period October 1, 2021 through March 31, 2022, DEQ issued 126 Warning Letters and 0 Letters of Agreement for violations of VPDES, VPA, VWPP, and Ground Water program requirements.

Formal enforcement actions are used in those cases where non-compliance is more serious or may take a significant amount of time to correct. Formal measures generally involve the issuance of a Notice of Violation followed by a Consent Order, or an Executive Compliance Agreement in the case of a state agency. In some cases, Unilateral Administrative Orders or court orders may be sought. Between October 1, 2021 and March 31, 2022, DEQ issued 37 Notices of Violation for violations of VPDES, VPA, VWPP, and Ground Water program requirements. During the same period, the agency concluded enforcement cases with the issuance of 26 Consent Orders that assessed a total of \$701,449.25 in civil charges.

Table 1

Measure	Action Type	Count	Total Civil Charges Assessed
Informal	Warning Letters	126	N/A
Informal	Letters of Agreement	0	N/A
Formal	Notices of Violation	37	N/A
Formal	Consent Order	26	\$701,449.25
Total		225	\$701,449.25

d) DEQ – Air Permitting Program

OFFICE OF AIR PERMIT PROGRAMS PERMITS ISSUED REPORT FOR VIRGINIA'S COASTAL RESOURCES MANAGEMENT PROGRAM

Period: October 1, 2021 – March 31, 2022

PERMIT TYPE	NUMBER OF PERMITS ISSUED	AVERAGE PROCESSING TIME (Days)
PSD & NA	0	NA
Major	2	130
**Minor	77	28
Administrative Amendment	5	6
Exemptions	8	14
State Operating	1	43
Federal Operating (Title V) Initial Issuance	0	NA
Federal Operating (Title V) Renewal	3	440
Acid Rain (Title IV)	0	NA
Total Number Permits Issued	<u>96</u>	

* The average processing time is determined by computing the difference between when the application was deemed administratively complete and when the permit was issued.

** Due to a reevaluation of applicability of the Non-Metallic Mineral Processing General Permits, several general permits were reissued as minor New Source Review permits. This is a one-time event.

Note: The information provided for this report includes data from the Northern Virginia Regional Office, Portions of the Piedmont Regional Office and the Tidewater Regional Office only.

Definitions:

Prevention of Significant Deterioration (PSD) = A source which emits **250 tons or more** per year of any regulated pollutant or is one of 28 specific industries listed in the state regulations and will emit 100 tons per year of a regulated pollutant.

Major = A source which emits, or has the potential to emit, **100 tons or more** per year of any air pollutant.

Minor = A source which emits, or has the potential to emit, **less than 100 tons** per year of any air pollutant.

State Operating= Permit written pursuant to 9 VAC 5-80-800 et al.

Administrative Consent Agreement = An agreement that the owner or any other person will perform specific actions to diminish or abate the causes of air pollution for the purpose of coming into compliance with regulations, by mutual agreement of the owner or any other person and the Board.

Administrative Amendment = Administrative changes made to the permit to clarify or correct an issued permit. For example, typographical errors, name changes, etc.

Exemption = Facilities are exempted from permitting requirements by exemption levels defined in 9 VAC 5-80-1105.

Federal Operating (Title V) = a source that emits **10 tons or more** per year of any hazardous air pollutant, **or 25 tons** per year of any combination of hazardous air pollutants or emits any criteria pollutant above 100 tons per year.

Acid Rain (Title IV) = Permits issued specifically to address SO₂ and NO_x from electric generating units covered under the Acid Rain regulations.

**OFFICE OF AIR PERMIT PROGRAMS
PERMITS PENDING REPORT FOR
VIRGINIA'S COASTAL RESOURCES MANAGEMENT PROGRAM**

Permits pending as of March 31, 2022

PERMIT TYPE	NUMBER OF PERMITS PENDING
PSD & NA	1
Major	0
Minor	72
Administrative Amendment	0
Exemptions	5
State Operating	5
Federal Operating (Title V) Initial Issuance	10
Federal Operating (Title V) Renewal	71
Acid Rain (Title IV)	10
Total Permits Pending	<u>174</u>

Note: The information provided for this report includes data from the Northern Virginia Regional Office, Piedmont Regional Office and Tidewater Regional Office only.

**OFFICE OF AIR PERMIT PROGRAMS
PERMITS WITHDRAWN AND APPLICATIONS DENIED REPORT FOR
VIRGINIA'S COASTAL RESOURCES MANAGEMENT PROGRAM**

Period: October 1, 2021 – March 31, 2022

PERMIT TYPE	NUMBER OF PERMITS WITHDRAWN	NUMBER OF APPLICATIONS DENIED
PSD	0	0
Major	0	0
Minor	4	0
Administrative Amendment	1	0
Exemptions	0	0
State Operating	0	0
Federal Operating (Title V)	1	0
Acid Rain (Title IV)	0	0
Total Permits Rescinded	<u>6</u>	<u>0</u>

Note: The information provided for this report includes data from the Northern Virginia Regional Office, Piedmont Regional Office and Tidewater Regional Office only.

e) DEQ – Air Program Enforcement and Compliance

DEQ continues to apply both informal and formal enforcement measures in its air enforcement program. Reference Table 1, on the following page.

Informal measures include Requests for Corrective Action, Informal Correction Letters, Warning Letters, and Letters of Agreement. These actions are used in those cases where non-compliance is not significant in nature and where compliance can be achieved in a short period of time. During the six-month period beginning October 1, 2021 through March 31, 2022, DEQ issued 29 Requests for Corrective Action, and 13 Warning Letters.

Formal enforcement actions are used in those cases where non-compliance is more serious or may take a significant amount of time to correct. Formal measures generally involve the issuance of a Notice of Violation and negotiation of a Consent Order, or an Executive Compliance Agreement in the case of a state agency. In some cases, Unilateral Orders or court orders may be pursued. Between October 1, 2021 and March 31, 2022, DEQ initiated 7 new formal enforcement actions via issuance of Notices of Violation. Additionally, the Agency issued 7 Consent Orders; assessing \$354,387.00 in civil charges.

Table 1

Measure	Action Type	Count	Total Civil Charges Assessed
Informal	Requests for Corrective Action	29	N/A
Informal	Warning Letters	13	N/A
Formal	Notices of Violation	7	N/A
Formal	Consent Orders	7	\$354,387.00
Total		56	\$354,387.00

f) DEQ – Erosion and Sediment Control

Summary of Specific Outputs:

Specific Outputs	Progress / Status
22 CZM Chesapeake Bay Land Disturbing Activities Permitted - Projects less than 1 acre found within Chesapeake Bay Designated Areas.	Permit coverage has been issued and projects are under construction. Compliance is achieved through ongoing permit review, technical assistance, and project inspection.
375 CZM Small Construction Activities Permitted- Land Disturbing Activities greater than or equal to 1 acre and less than 5 acres.	Permit coverage has been issued and projects are under construction. Compliance is achieved through ongoing permit review, technical assistance, and project inspection.
122 CZM Large Construction Activities Permitted- Land Disturbing Activities greater than or equal to 5 acres and less than 10 acres.	Permit coverage has been issued and projects are under construction. Compliance is achieved through ongoing permit review, technical assistance, and project inspection.
129 CZM Large Construction Activities Permitted- Land Disturbing Activities greater than or equal to 10 acres and less than 50 acres.	Permit coverage has been issued and projects are under construction. Compliance is achieved thru ongoing permit review, technical assistance, and project inspection.
17 CZM Large Construction Activities Permitted- Land Disturbing Activities greater than or equal to 50 acres and less than 100 acres.	Permit coverage has been issued and projects are under construction. Compliance is achieved thru ongoing permit review, technical assistance, and project inspection.
12 CZM Large Construction Activities Permitted- Land Disturbing Activities greater than or equal to 100 acres.	Permit coverage has been issued and projects are under construction. Compliance is achieved thru ongoing permit review, technical assistance, and project inspection.
677 Total CZM Land Disturbing Activities Permitted thru coverage under the Construction General Permit.	Coastal Zone Management resources are conserved and restored through permit compliance.

Supplemental Narrative:

Considerable erosion and sediment control and stormwater management progress occurred during the performance period. New and improved requirements for project stabilization during construction and recently enhanced post construction requirements will result in further improvements to coastal zone resources. The new post construction requirements have been developed to more closely mimic predevelopment hydrology found in a naturally wooded site condition. The implementation of these new requirements will result in less downstream sediment export and fewer nutrient export impacts from land development.

g) DEQ- Office of Stormwater Management – Local Government Assistance Programs- Chesapeake Bay Preservation Act

Summary Summary

Program Description

The Chesapeake Bay Preservation Act program is designed to improve water quality in the Chesapeake Bay and other waters of the State by requiring the use of effective land management and land use planning. Specifically, these requirements fall into three implementation phases. Phase I consists of local governments designating and mapping Chesapeake Bay Preservation Areas (CBPAs) and adopting land use and development performance criteria to protect those features. CBPAs include Resource Protections Areas (RPAs) and Resource Management Areas (RMAs). RPAs are made up of tidal wetlands, tidal shores, nontidal wetlands connected and contiguous to tidal wetlands or perennial streams and a 100-foot fully vegetated buffer. RMAs include lands adjacent to RPAs that are made up of land features such as highly erodible soils, steep slopes, and floodplains. Sixty of the 84 Tidewater localities have identified their entire jurisdiction as RMA. Phase II consists of the incorporation of water quality protection measures into local comprehensive plans. Phase III involves the review and revision of local land use codes to include specific standards that implement water quality performance criteria.

Technical Assistance & Training

During the reporting period October, 1 2021 – March 31, 2022 staff continued to provide technical assistance and training to Bay Act localities. For this period, two outreach events were conducted, and 70 instances of technical assistance, including site plan review, were documented.

Environmental Impact Reviews

Through the Environmental Impact Review process, staff continued to review plans for State and Federal projects to ensure those projects were consistent with the Chesapeake Bay Preservation Act. During the reporting period, 58 environmental impact reviews were conducted.

Compliance Reviews

During the reporting period, four new Compliance Reviews were initiated, one was completed, and three Condition Reviews are ongoing. Since the Compliance Review process was reinitiated in 2015 (after having been suspended for a period of three years to allow LGAP staff to work on local stormwater program development, and then again for one year for LGAP staff to work on the Phase III WIP), 83 reviews have been initiated or completed and 72 localities have been found compliant. During these reviews, staff assess how well local governments are ensuring that impervious cover and land disturbance are minimized, and indigenous vegetation is preserved on approved development projects and if other Chesapeake Bay Preservation Act general performance criteria are being applied to the use and development of land.

2) VIRGINIA MARINE RESOURCES COMMISSION (VMRC)

a) VMRC – Habitat Management Division

During the period October 1, 2021 through March 31, 2022, the Habitat Management Division received 1,352 applications for projects involving State-owned submerged lands, wetlands or dunes. These applications were for projects such as piers, boathouses, boat ramps, marinas, dredging and shoreline stabilization. As the clearinghouse for the Joint Permit Application all applications were assigned a processing number by the Division and forwarded to the appropriate agencies, including, local wetlands boards, the Norfolk District of the U.S. Army Corps of Engineers, the Department of Environmental Quality, VIMS and others as necessary.

A public interest review was initiated and site inspections were conducted for those projects requiring a permit from the Marine Resources Commission. Likewise, Habitat Management staff also conducted site inspections for all projects requiring a local wetlands board permit and evaluated each local board decision for Commissioner review. Habitat Management staff also conducted compliance inspections on permits issued by VMRC and local wetlands boards.

The Habitat Management Staff completed actions on 1,157 applications received during the period. Action on most applications was completed within 90 days after they were received. As such, a number of the actions taken during the period were for applications received prior to October 2021. Similarly, those applications received near the end of the current reporting period are still under review. Habitat Management Staff also participated in the inter-agency review process involving general permits for Virginia Department of Transportation projects.

In addition to staff actions, the full Commission considered 28 projects. During the reporting period the Commission considered 13 protested projects or projects requiring a staff briefing. The Commission also approved 15 projects over \$500,000.00 in value.

During the reporting period, local wetland boards throughout Tidewater Virginia acted on 142 projects involving tidal wetlands. Of this total, 111 were approved as proposed, 23 were approved as modified, 2 were denied, 6 are pending, and 30 required compensation either on or off site (13), or through payment of an in lieu fee (17) accounting for 58,753 square feet of tidal wetland impacts.

b) VMRC – Fisheries Management Division

At the December 2021 meeting, the agency modified Chapter 4 VAC 20-620-10 et seq. "Pertaining to Summer Flounder" to allow the Commission to establish by public announcement landing dates, possession limits, and landing limits for summer flounder commercially harvested offshore (federal waters) and landed in Virginia and to amend language relating to quota monitoring.

At the January 2022 meeting, the agency modified Chapter 4 VAC 20-950-10 et seq., "Pertaining to Black Sea Bass", to close the February recreational black sea bass season for 2022. Management measures are expected to be finalized in late February or March of 2022, ahead of the May 15 regular season opening. Without final recreational management measures in place, staff recommended Virginia not hold a 2022 February recreational black sea bass fishery.

At the February 2022 meeting, the agency modified Chapter 4 VAC 20-1180-10 et seq., "Pertaining to Fishing Guides", to 1) define existent freshwater/saltwater delineation lines, 2) clarify language for license qualification requirements, and 3) establish penalties. The Commission also approved repealing Chapter 4 VAC 20-1150-10 et seq., "Pertaining to Charter Boat and Head Boat Fisheries". At the same meeting, the agency amended

Chapter 4 VAC 20-1270-10 et seq., "Pertaining to Atlantic Menhaden", to establish the 2022 Total Allowable Catch per Amendment 3 to the Interstate Fishery Management Plan for Atlantic Menhaden and to establish all associated fishery sector allocations in response. At the same meeting, the agency modified Chapter 4 VAC 20-450-10 et seq., "Pertaining to the Taking of Bluefish," to remove the definition of annual quota as a specified percentage of the coastwide allocation, allowing annual updates to the allocation to occur administratively in accordance with Amendment 7 to the Atlantic Bluefish Fishery Management Plan.

At the March 2022 meeting, the agency modified Chapter 4 VAC 20-490-10 et seq., "Pertaining to Sharks," to update the commercial smooth dogfish annual quota.

c) VMRC – Law Enforcement Division

Enforcement under "Other Agency" refers to summons issued for other agencies' laws, code or regulation sections. The majority of the summons in this category are for DGIF regulations on boating safety laws, expired boat registration, no life jackets, flares, etc.

Summons under "Police Powers" are all criminal vs fisheries. These are the reckless driving, drunk driving, driving without a license/suspended license, shoplifting, possession of controlled substances.

VIRGINIA MARINE POLICE ARRESTS/CONVICTIONS SUMMARY BY CATEGORY

REPORT FORMAT: FEDERAL FISCAL YEAR AREA: ALL AREAS
START PERIOD: 10/01/2017
END PERIOD: 09/30/2022



Category	2017/2018		2018/2019		2019/2020		2020/2021		2021/2022	
	Convictions	Arrests	Convictions	Arrests	Convictions	Arrests	Convictions	Arrests	Convictions	Arrests
Buyers	1	1	0	3	0	0	5	5	2	2
Casting Garbage/Trash	0	0	0	0	0	0	1	2	0	0
Clams	1	1	0	0	0	0	0	0	0	0
Commercial Fishing License	12	15	8	68	15	52	11	17	1	5
Conchs	0	2	3	6	2	3	0	0	0	0
Crabs	26	34	64	75	39	54	37	53	7	9
Federal Violation	0	0	0	0	0	0	0	0	0	0
FIP Violations	36	37	32	34	2	3	14	19	1	2
Fish	130	147	322	357	250	275	194	206	43	45
Freshwater Fishing without a license	9	10	23	25	1	2	6	6	0	0
Gill Nets	2	5	3	5	16	16	4	8	0	0
Habitat/Wetlands	0	0	0	0	0	0	0	0	0	0
License Tags	0	0	0	0	0	0	1	2	0	0
Mandatory Reporting	0	0	22	65	8	38	0	4	0	0
Misc	0	0	0	27	3	18	5	5	0	0
Non-residents	0	0	0	0	0	0	0	0	0	0
NSSP	0	0	0	0	1	1	0	0	0	0
Other Agencies	481	604	506	651	253	325	163	183	30	48
Oysters	78	105	82	193	49	127	32	50	12	15
Piers	0	0	0	1	3	3	0	0	0	0
Police Powers	0	0	0	0	0	0	0	0	0	0
Removal of Obstructions	0	0	2	2	1	1	3	3	0	0
Resisting officer	0	0	0	0	0	0	0	0	0	0
Shellfish	0	0	2	7	0	1	0	0	0	0
SW Recreational Licenses	132	141	151	171	68	81	42	48	22	22
TOTALS:	908	1102	1220	1690	711	1000	518	611	118	148
PERCENT OF CONVICTIONS:	82.40%		72.19%		71.10%		84.78%		79.73%	

3) VIRGINIA DEPARTMENT OF HEALTH (VDH) – DIVISION OF SHORELINE SANITATION

From October 1, 2021 through March 31, 2022, the VDH Division of Shellfish Safety and Waterborne Hazards had...

648 acres of shellfish grounds formerly open year-round now closed to harvesting year-round,
227 acres of shellfish grounds formerly closed year-round now open to harvesting year-round,
1538 acres of shellfish grounds formerly open year-round now seasonally closed,
441 acres of shellfish grounds formerly closed year-round now seasonally opened,
1435 acres of shellfish grounds formerly seasonally closed now closed year-round, and
1141 acres of shellfish grounds formerly seasonally opened now opened year-round.

Activities of the Virginia Department of Health for the Virginia Coastal Resources Management Report are summarized below. This includes statics on applications for sanitary facilities at marinas and other places where boats are moored.

The Department received and reviewed a total of Nineteen (19) VMRC Permit Applications, and processed as follows:

Sixteen (16) applications were approved based on meeting the requirements of providing adequate facilities of the Marina Regulations if applicable.

Three (3) applications were denied because of not meeting regulation requirements.

4) Department of Conservation and Recreation (DCR)

a) DCR - Division of Soil and Water Conservation

Nutrient Management

DCR Nutrient Management Staff have been active in developing and reviewing nutrient management plans as well as other nutrient reduction activities to achieve the Commonwealth's nutrient reduction commitments of the Chesapeake Bay TMDLs. In the coastal zones of Virginia, DCR staff have overseen the development of nutrient management plans covering 23,266.02 acres during the reporting period (10/1/2021 – 3/31/2022). Many plans are active for up to three years, all new or revised acreage developed by DCR planners in the coastal zones during the reporting period are summarized in the following table:

Table 1: Planned nutrient management acreage by land use and costal management zones. Plans started between 10/1/2021 – 3/31/2022.

CZM Basin	Number Of Plans	CZM Crop Acres	CZM Hay Acres	CZM Pasture Acres	CZM Specialty Acres	Total
Albemarle Sound	2	683.13	-	-	-	683.13
Atlantic Ocean	6	1153.73	-	-	-	1153.73
Chesapeake Bay Coastal	17	1558.75	9.57	3.70	-	1572.02
Chowan	2	112.96	-	-	-	112.96
James	7	1108.71	9.59	14.78	-	1133.07
Potomac	2	801.88	-	-	-	801.88
Rappahannock	15	8844.91	162.60	-	-	9007.51
York	19	8202.12	283.50	316.09	-	8801.71
Total:	70	22466.19	465.26	334.57	0.00	23266.02

Shoreline Erosion Advisory Service

DCR's Shoreline Erosion Advisory Service (SEAS) was established in 1980 by the Virginia General Assembly as a resource for shoreline landowners and communities. The program provides unbiased, science-based technical assistance on environmentally sound shoreline management alternatives to private property owners and public land management agencies that are experiencing erosion on tidal shorelines or non-tidal streambanks and impoundments. Services provided by SEAS include on-site field investigation and analysis of erosion concerns, written advisory reports with recommended solutions, review of engineering designs and construction plans, on-site construction inspections, and guidance on available financial incentive programs. Since its inception, SEAS has evaluated hundreds of miles of shoreline and provided invaluable technical assistance to thousands of Virginia property owners experiencing shoreline erosion.

For this reporting period, SEAS staff conducted 80 site visits, wrote 38 advisory reports, evaluated 46,752 feet of shoreline, and reviewed and provided comments to VMRC on 3 joint permit applications (JPAs). During a site visit, staff walks the shoreline with the owner and assesses the cause(s) of the erosion problem. Staff then review with the owner, what they believe are the most appropriate shoreline erosion control and protection strategies for that site. The suite of solutions to shoreline erosion varies along a continuum of green-to-grey infrastructure – planting marsh vegetation, bank grading, marsh toe revetments of oyster shell bags, stone sills with sand nourishment and marsh vegetation plantings, riprap revetments, offshore gapped breakwaters, wood or vinyl bulkheads. Living shorelines are the Commonwealth's preferred shoreline stabilization practice.

SEAS is working with the Virginia Institute of Marine Science (VIMS), Virginia Marine Resources Commission (VMRC), and DEQ to 1) identify shoreline management practices (e.g., living shorelines) across tidal Virginia that qualify for Chesapeake Bay TMDL WIP pollutant reduction credits, 2) verify that installation of these practices meets the specifications set out by EPA's Chesapeake Bay Program, and 3) quantify and report the earned pollutant reduction credits as part of the Commonwealth's efforts to meet goals established in the WIP. The first round of these pollutant reduction credits was reported to DEQ in October 2017; subsequent rounds were reported in November 2018, November 2019, and November 2020. During this reporting period, an additional 226 sites have been verified and the associated pollutant reductions were reported to DEQ in November 2021 (see table below); number of sites verified was negatively impacted by limited field time in spring/summer 2021 due to COVID-19 pandemic restrictions.

	Submitted November 2021	Total Submitted 2017-2021
Protected Shoreline (ft)	49,318	292,920
Number of Sites	226	1,425
Pollutant – TN [Total Reduction (lbs./yr.)]	2,649.7	34,010.6
Pollutant – TP [Total Reduction (lbs./yr.)]	1,312.8	23,142.6
Pollutant – TSS [Total Reduction (tons/yr.)]	1,068.5	19,005.2

b) DCR - Division of Natural Heritage

This report lists projects and activities conducted by the Department of Conservation and Recreation, Division of Natural Heritage (DCR-NH) during this period that were not funded by or otherwise reported to the VCZMP

Inventory

Over multiple weeks in October 2021, DCR-Natural Heritage field botanist Jenny Stanley completed surveys for the globally rare Raven’s Seedbox (*Ludwigia ravenii*) (G1G2/S1). During this project, four new populations were discovered with a total of over 500 plants among them. These discoveries are significant in that they represent a nearly twofold increase in the number currently existing populations globally. Due to its rarity, and drastic population declines over the past 50 years, the US Fish & Wildlife Service is funding projects to search for more populations of this species to determine its status and the potential for future inclusion on the Federal Threatened and Endangered species list. Several additional rare plants were discovered during the surveys, including two new populations of Hairy Primrose-Willow (*Ludwigia pilosa*) (G5/S1).



Left: *Ludwigia ravenii* (S1). Right: *Ludwigia sphaerocarpa* (S3) and *Ludwigia pilosa* (S1).

From January 3rd to January 14th, 2022, Zoology lab manager Olivia Latham and Zoology lab technician Charly Hartle attended an online wasp identification course directed by Louis Nastasi of Pennsylvania State University's Frost Entomological Museum. The course included lectures by 19 instructors and was attended by over 300 students. The instructors consisted of a variety of wasp experts, taxonomists, and enthusiasts from around the world. Along with instruction on the identification of wasps, the course included preservation and collection methods for wasps and information about their biology and biodiversity. The course also included a virtual laboratory component with high-quality specimen images where students learned to identify wasps to family level using key identifying features described in the lab manual. The course materials were allowed to be distributed to Virginia Natural Heritage Zoologists, including a list of VA wasp families to look out for. This information will allow technicians to more easily identify wasp specimens within trap samples and will enable the curation of a wasp reference collection within the Zoology lab.



Photographs © Simon van Noort (Iziko Museums of South Africa). Superfamily Chalcidoidea, Family Chalcididae

In December 2021, DCR Natural Heritage (DNH) Ecologist Kristin Taverna submitted the final products for the vegetation classification and mapping of land additions at Richmond National Battlefield Park (RICH). Natural Heritage Ecologists began working with NPS at Richmond National Battlefield nearly 15 years ago (2008) to inventory and map the entire park, following the protocols of the USGS-NPS Vegetation Mapping Program. The original 2008 report was part of a regional project to map and classify the vegetation in seven national parks in Virginia. In 2015, DNH produced an addendum to the original report and mapped the vegetation in newly acquired parcels. Since 2015, the NPS has acquired an additional 820 acres of land within 12 individual parcels, including the 650-acre North Anna unit. This report is a second addendum to the 2008 report and documents the mapping of vegetation and other land-use classes for the 12 new land parcels at RICH, with an updated vegetation map for the entire park. The updated map and associated data provides information on the sensitivity and ecological integrity of habitats and can help prioritize areas for protection. The vegetation map of the new land parcels represents 14 associations from the United States National Vegetation Classification (US NVC). Two new natural community types identified at North Anna meet the size, condition, and landscape context to be considered Natural Heritage exemplary natural community occurrences (EOs) and will be targeted for protection and management as needed; Coastal Plain / Outer Piedmont Basic Mesic Forest and Southern Piedmont / Inner Coastal Plain Floodplain Terrace Forest. Additional final products include detailed descriptions of new vegetation types and a field key to all the vegetation types in the park.

On January 3, 2022, DCR-DNH zoology staff submitted a report to the USFWS summarizing the available results of 2021 field surveys for the Bethany Beach Firefly (BBFF, *Photuris bethaniensis*, G1 SNR). In December, 2019, the U.S. Fish and Wildlife Service (USFWS) found that the Bethany Beach Firefly (BBFF,

Photuris bethaniensis, G1 SNR) warranted further review to determine if it should be added to the list of federally threatened and endangered species under the Endangered Species Act (USFWS, 2019). This led to a grant from USFWS for DCR-DNH to conduct surveys for BBFF in Virginia during 2021. The species was thought to be endemic to coastal Delaware, where it occupies interdunal swales, a habitat type also found throughout much of coastal Virginia. DCR-DNH zoologists conducted surveys at False Cape State Park, Wallops Island and Chincoteague National Wildlife Refuge (southern portion of Assateague Island) during 2021. A number of specimens were collected during surveys that exhibited similar behavior and the double green flash pattern exhibited by BBFF. Identification of specimens collected during DCR-DNH's 2021 surveys is pending further examination and genetic comparison.



Bethany beach firefly (*Photuris bethaniensis*), Global Conservation status ranking of Imperiled (G1)

In February 2022, DCR Ecologists completed vegetation maps and descriptions for Holliday Lake State Park, Widewater State Park, and Clinch River State Park – Sugar Hill tract. DCR's Divisions of Natural Heritage and State Parks work to map the vegetation communities across Virginia's State Parks. Since 2012, Natural Heritage ecologists have inventoried and mapped the vegetation of 19 State Parks. Specific vegetation types are determined with on-the-ground field data collection combined with aerial photo interpretation. In addition to maps developed using ArcGIS, a report is developed for each State Park including vegetation descriptions, and a list of threats and specific management recommendations for each natural vegetation type in each park. Natural Heritage Ecologist, Kristin Taverna and (recently retired) Gary Fleming, recently completed the maps and full vegetation descriptions for Holliday Lake State Park, Widewater State Park, and Clinch River State Park – Sugar Hill tract. The map for Holliday Lake identifies five significant Natural Heritage resources (element occurrences), including the site for Torrey's Mountain Mint (*Pycnanthemum torreyi*) (G2/S2), a globally rare mint that occurs in a powerline right-of-way at the park. The map for Widewater State Park identifies two significant Natural Heritage resources, including multiple patches of Coastal Plain Depression Swamp (Willow Oak - Red Maple - Sweetgum Type) (G3/S2), a state rare seasonally-flooded wetland forest. The map for Clinch River State Park – Sugar Hill tract identifies four significant Natural Heritage resources, including the site for two state rare plants, Gyandotte Beauty (*Synandra hispidula*) (G4/S2) and Shining Ladies' Tresses (*Spiranthes lucida*) (G4/S1S2).

Prescribed Burning

Natural Area Preserve Stewardship

On October 11-13, 2021, DCR's Southeast Region Steward Darren Loomis worked with the Department of Forestry's (DOF) Longleaf Pine Coordinator to complete the annual harvest of native Virginia longleaf pine cones. This year's harvest was small, with just 35 bushels of cones collected from mature trees at South Quay

Sandhills Natural Area Preserve (SQSNAP). This 3,753-acre preserve flanking the NC state line protects the last remaining occurrence of mature, native longleaf pines in Virginia. A cooperative effort between DCR and DOF has been ongoing for 15 years to collect cones at SQSNAP to provide a seed source for DCR's restoration efforts on multiple state natural area preserves in southeast Virginia. Longleaf cone crops vary drastically from year to year. A historic maximum harvest of 240 bushels occurred in 2014, while only eight bushels were produced in 2020. The size of the annual cone harvest drives the pace of DCR's longleaf restoration work as only native, locally sourced seedlings are used on natural area preserve system projects.



DCR Southeast Region Steward Darren Loomis collects longleaf pine cones at South Quay Sandhills Natural Area Preserve.

On October 20, 2021, members of the Central Rappahannock Chapter of the Virginia Master Naturalists (CRC-VMN), with assistance from DCR Natural Heritage staff, kicked off the third year of vernal pool monitoring at Crow's Nest Natural Area Preserve, to continue through the spring of 2022. Participants visited many of the 35 established monitoring sites to establish the presence of breeding marbled salamanders (*Ambystoma opacum*). Marbled salamanders lay eggs in vernal pools prior to their flooding in late fall and winter. Heavy rains in the summer of 2020 flooded many of the ponds early and reduced marbled salamander breeding at Crow's Nest. The goal of the study is to collect long-term data on relative abundance of amphibians in order to inform management decisions at the preserve. Another goal is to evaluate if and how changes to hydrology within the preserve may affect reproductive success of and competitive interactions between various salamander species.



At left, a Marbled Salamander with eggs. At right, volunteers with the CRC-VMN conduct vernal pool monitoring activities at Crow's Nest Natural Area Preserve.

On November 16, 2021, DCR Northern Region Stewardship staff opened the recently completed Chinquapin Oak Trail to the public at Crow's Nest Natural Area Preserve. This spur trail connects to the main Crow's Nest Point hiking trail, largely following an old woods road about 0.6 miles through mesic mixed hardwood forest to

a low bluff overlooking Freshwater Tidal Marsh along Accokeek Creek. Numerous chinquapin oaks (*Quercus muehlenbergii*) – an infrequent to rare species in the Coastal Plain where it is limited to shell-rich calcareous soils – are common along the trail. DCR Natural Heritage staff spent approximately two months on layout and construction. In addition, staff installed a simple bench at the terminus, made from a fallen black locust tree found along the trail. With this addition, approximately 8.6 miles of trails are now available for visitors to experience at Crow’s Nest.



The new Chinquapin Oak Trail at Crow’s Nest Natural Area Preserve winds through mixed mesic hardwood forest and ends at a low bluff overlooking tidal Accokeek Creek.

Following the January 3, 2022 winter storm, DCR Northern Region Stewardship staff completed cleanup from damage caused by the storm. Approximately 12 inches of wet heavy snow fell in Stafford County causing extensive tree damage and power outages. Damage to power lines and poles prevented vehicular access to the Raven Road access gate at Crow’s Nest Natural Area Preserve for five days after the storm. Within the preserve, impacts were concentrated at lower elevations along both the entrance road and hiking trails. Northern Region staff spent approximately 160 person-hours re-opening roads and trails, including both reconnaissance and cleanup. The Brooke Road entrance was reopened on January 12 and the Raven Road entrance on January 14. In the coming weeks, staff will carry out additional work to re-open management roads in preparation for upcoming 2022 invasive species control projects requiring equipment access.



A major winter storm in early January 2022 covered trails and roads with woody debris at Crow’s Nest Natural Area Preserve.

In January 2022, DCR Northern Region natural areas stewards completed a project to fell over 100 hazard trees located adjacent to and within 100 feet of Brooke Road along the northeast boundary of Crow's Nest Natural Area Preserve in Stafford County, in order to mitigate a hazard to motorists. The presence of invasive, non-native emerald ash borers (*Agrilus planipennis*) was detected at Crow's Nest in approximately 2014. Since then, this destructive introduced insect has killed thousands of green and white ash trees across the preserve (and throughout the eastern U.S.). In the Accokeek Creek bottomlands south of Brooke Road, the extreme loss of tree canopy has reduced forest evapotranspiration rates. This factor, along with increased runoff from adjacent new subdivision development, has contributed to chronically high water levels within the floodplain of Accokeek Creek. As a result, additional tree species within the forested wetlands (red maple, American sycamore) have also declined and died. Beginning in the summer of 2021, DCR Natural Heritage staff inventoried and mapped dead trees along Brooke Road, identifying those trees posing the greatest hazard to the public. In late fall of 2021, a licensed tree removal company was contracted, and tree felling was completed in the last week of January 2022.



Views of recent hazard tree removal work within the bottomland forest along Accokeek Creek at Crow's Nest Natural Area Preserve.

On January 25, 2022, DCR's Natural Heritage Program and Virginia Outdoors Foundation (VOF) natural areas stewards collaborated with the Natural Areas Association (NAA) to present a virtual field workshop entitled *Sustainable Summits: Managing Public Access for the Protection of Rare Plant Communities*. Over 100 participants from across the U.S. and Canada joined in the workshop to hear shared experiences of DCR and VOF natural areas stewards who have managed public access within fragile high elevation habitats for over two decades. Workshop presentations included three professionally produced video segments filmed during an in-person field workshop held at Claytor Lake State Park in September 2021, with field trip segments taped on-location at Buffalo Mountain and The Channels natural area preserves. A live panel discussion and Q&A session – facilitated by NAA Executive Director Lisa Smith, concluded the program. This format enabled NAA, DCR and VOF staff an opportunity to reach a large and varied audience, presenting strategies designed to protect resources while still providing sustainable recreational opportunities. As indicated by the high attendance and numerous questions/comments from participants, information provided in this workshop was of great interest and will be of use to resource managers challenged with providing public access to ecologically important and fragile lands across North America.



On March 10, 2022, DCR Chesapeake Bay Region Natural Areas Stewardship staff Zach Bradford and Hali Haskins installed deer exclosure fencing around pondspice (*Litsea aestivalis*) – an extremely rare shrub species in Virginia. The two individuals that occur at Grafton Ponds Natural Area Preserve in York County are currently experiencing negative impacts from browsing by locally overabundant white-tailed deer. A representative from Newport News Waterworks – the preserve’s landowner – assisted with this fencing effort. A southeastern coastal plain endemic, pondspice inhabits the margins of seasonally inundated forested swamps and depression ponds. Pondspice is rare across its entire range (G3) and critically imperiled at the state level (S1), having been seen at just three Virginia sites over the last two centuries. For many years, the two individuals at Grafton Ponds were the only representatives of the species known in Virginia. Today, two of Virginia’s three pondspice populations are protected on lands of the state natural area preserve system. Pondspice is declining across its range due to hydrological alterations, disruption of historic natural fire cycles, and impacts from laurel wilt – an invasive fungus currently decimating members of the laurel family (*Lauraceae*).



Pondspice leaves and flowers - a rare species occurring at Grafton Ponds Natural Area Preserve



Exclosure fencing was installed to protect Pondspice from deer damage at Grafton Ponds NAP.

On March 28, 2022, the DCR Natural Heritage Northern Region staff, working with staff with the Northern Virginia Conservation Trust (NVCT), initiated cleanup of the Bowling Tract. The Bowling Tract was recently purchased by NVCT and will be conveyed to DCR and dedicated as an addition to Crow's Nest Natural Area Preserve in the coming months. In the 1950s and 1960s, the Bowling family operated a logging camp within the property. DCR and NVCT staff filled over 50 trash bags, mostly with glass bottles and cans. In addition, several tires and kitchen appliances were removed. Staff with the Virginia Department of Transportation kindly hauled the material to the local landfill.



The DCR and NVCT cleanup team at Crow's Nest Natural Area Preserve.

Invasive Species

From September 29, 2021 through October 1, 2021, DCR Natural Area Stewards and State Park Resource Specialists worked together – with outstanding support from DCR Procurement Staff – to complete the largest Phragmites control project ever undertaken by DCR. A total of 583 acres of Phragmites (*Phragmites australis*) was treated on 13 state natural area preserves (NAP) and state parks (SP), ranging from Widewater SP and Crow’s Nest NAP on the north to Northwest River NAP and False Cape SP on the south. Phragmites is a highly invasive, non-native wetland grass species that threatens biodiversity of Virginia’s marshes and coastal shorelines. For many years, DCR resource managers have been working to control and slow the spread of this invasive grass by treating it with an approved herbicide. For larger and hard-to-access areas, the most effective control method is to treat stands of Phragmites using aerial spray applications delivered by helicopter. This was the first time that DCR was able to contract with a single vendor to treat a large number of parks and preserves across most of the coastal portion of Virginia.



DCR Natural Heritage and State Park resource managers teamed up in fall of 2021 on a contracted aerial Phragmites control project, covering parks and preserves from Stafford County to Virginia Beach and treating a total of 583 acres.

On October 25, 2021, DCR’s Natural Heritage Stewardship Biologist Kevin Heffernan and Invasive Species Technician AG Sweany joined Fairfax County invasive species management staff plus volunteers from the National Capital Region Partnership for Regional Invasive Species Management (NCR-PRISM) in removing an infestation of Two-horned Trapa (*Trapa bispinosa*) from Lake Accotink Park. Two-horned Trapa is a recently-identified species in Virginia and exhibits all the invasive characteristics of its cousin, the better-known European Water Chestnut (*Trapa natans*). Two-horned Trapa is a perennial aquatic species that roots in substrates up to 15 feet below the surface of ponds, lakes, and slow-moving streams. It can spread quickly and cover the surface of these water bodies, inhibiting boaters and competing with native plants for sunlight and nutrients. DCR is partnering with the Department of Wildlife Resources, Fairfax County, NCR-PRISM and volunteers to identify, map and control this species before it can spread beyond its current known range in northern Virginia. This winter, a Two-horned Trapa steering committee will work to complete a management plan for this problematic species.



Natural Heritage Invasive Species Technician AG Sweany (2nd from left) helps partners remove Two-horned Trapa from Lake Accotink Park in Fairfax County, Virginia.

On November 10, 2021, during a field visit to a recent land protection project, DCR Natural Heritage staff members Shannon Alexander and Rob Evans noted several problematic plant species invading the Cape Charles Natural Area Preserve. Of particular concern were several patches of Fountain Grass (*Cenchrus purpureus*). This non-native species, also known by the more frequently used scientific synonym *Pennisetum alopecuroides*, is often used in ornamental plantings and has been cultivated in Virginia since at least 1912. The species is currently reported outside cultivation in 9 widely scattered counties (Digital Atlas of the Virginia Flora). According to DCR's Gary Fleming, this species was first reported as escaping cultivation in 1993 in the Commonwealth and is becoming an increasingly problematic escape. It has been listed as an emerging threat to natural areas in the mid-Atlantic region by the National Park Service. The plants found at Cape Charles represent the first documentation of this species in Northampton County and the first time this invasive species has been located on one of Virginia's Natural Area Preserves.



Invasive, non-native Fountain Grass (*Cenchrus purpureus*) at Cape Charles Natural Area Preserve.

On November 17, 2021, DCR's Invasive Species Technician AG Sweany and Stewardship Biologist Kevin Heffernan, plus University of Richmond intern Riley Place, assisted in collecting 500+ fertile Two-horned Trapa (*Trapa bispinosa*) seed pods for a U.S. Army Corps of Engineers-funded study on the biology of this highly invasive aquatic plant species. Seed pods were collected from an infested pond on private property in

Fairfax County. Using a drone, Heffernan and Sweany also captured high-resolution imagery of three other infested ponds to assist with another project that will attempt to detect Two-horned Trapa infestations via remote imagery. With over 700 ponds in proximity to 54 known infested Trapa sites, the ability to detect infestations remotely will be a critical tool in guiding management. Other partners on-site included Nancy Rybicki of USGS and George Mason University, and Sara Tangren – Director of the Capital Region Partnership for Regional Invasive Species Management.



Invasive Species Technician AG Sweany (left) and University of Richmond's Riley Place (right) collect Two-horned Trapa seed pods from a pond in Fairfax County, Virginia.

On February 28, 2022, the Environmental Review Team and Protection Manager Rob Evans kicked off the National Invasive Species Awareness Week (February 27-March 5) by spending a few hours removing invasive plant species from the Heritage Half Acre (HHA) within the James River Park System. The team mechanically removed a large amount of Chinese privet and English ivy on the eastern edge of the HHA bordering the impoundment adjacent to the railroad tracks.



Before photo of the man-made impoundment within the Heritage Half Acre.



After photo of the man- made impoundment within the Heritage Half Acre.

In addition, signs were placed in the HHA during the week informing trail users of the work Heritage is doing along with other partners as part of the James River Park System Invasive Plant Task Force (<https://jamesriverpark.org/invasives/>) efforts to remove invasives throughout the park. The great weather allowed for a fun and productive morning.



DCR signage informing the public of on-going restoration efforts for the Heritage Half Acre.

On March 16, 2022, DCR Stewardship Biologist Kevin Heffernan and James River Park Invasive Species Coordinator Laura Greenleaf were interviewed by NBC12 journalist and meteorologist Andrew Friedan regarding Callery Pear (also known as a popular cultivar – “Bradford Pear”), a highly invasive non-native tree species. The interview was conducted on a site adjacent to a VDOT right-of-way with a significant infestation of the pear, which outcompetes native vegetation and disrupts important food webs for pollinators and birds. “Bradford Pear” was a popular street tree until undesirable characteristics emerged, including an offensive flower odor, splitting of large branches during relatively mild ice and wind storms, and the ability to outcross with other pear cultivars and produce viable seeds that readily establish and invade other sites. The interview will air sometime during the week of March 21. NBC12 will also publish a webpage with video and resources

on control and landscaping alternatives for Callery Pear and other invasive species provided by Heffernan and Greenleaf.



NBC12's Andrew Friedan, JRP's Laura Greenleaf, and DCR Stewardship Biologist Kevin Heffernan.

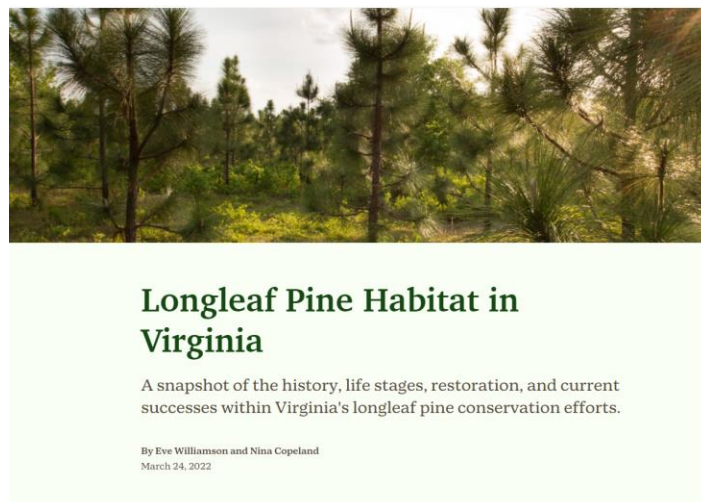
Information Management

On February 2, 2022, staff from several agencies visited three southeastern Natural Area Preserves to discuss Longleaf Pine ecosystems and habitat restoration efforts. Led by Rebecca Wilson of DCR's Natural Heritage Program and Bobby Clontz of The Nature Conservancy, trip participants toured Piney Grove Preserve, Chub Sandhill Natural Area Preserve, Garland Gray Forestry Center, and Blackwater Ecological Preserve. Other agencies present included VA Department of Forestry and VA Department of Wildlife Resources. The group learned about the different life stages and fire adaptations of the Longleaf Pine, as well as pine savanna ecosystems and their inhabitants, including the Red-Cockaded Woodpecker. Land management practices for creating and maintaining these ecosystems were discussed, including prescribed fire, timber management, and cone harvesting and planting techniques. During the visit, members of the Natural Heritage Data Management team gathered photos and information that will be used as part of a Story Map to showcase Longleaf Pine habitat for the upcoming Women in Fire Training Exchange (WTREX) being held in Wakefield, VA in early spring 2022.



Staff from The Nature Conservancy and VA DCR - Natural Heritage Program pose with longleaf pine cones and a young longleaf transitioning from 'grass' stage to 'bolting' stage at Blackwater Ecological Preserve.

On March 30, 2022, a new StoryMap, titled *Longleaf Pine Habitat in Virginia*, has been published by DCR's Natural Heritage Program staff to showcase longleaf pine ecology and management practices in Virginia. Created by Data Management Specialists Nina Copeland and Eve Williamson, the StoryMap covers the history, life stages, restoration efforts, and conservation practices for longleaf pine within its range in the Commonwealth. The StoryMap was designed to provide foundational information to participants in the Women-in-Fire Prescribed Fire Training Exchange (WTREX), to learn the local ecology in their training location in southeastern Virginia. [WTREX](#) is an intensive, 12-day training exchange, and is ongoing in Wakefield from March 28th to April 8th, 2022. WTREX combines practical live-fire training with indoor learning and discussion to advance participants' wildland fire experience and qualifications. Participants traveled nationally and internationally to attend training, thus the StoryMap provides important context and background for the local prescribed fire conditions and environments where the live fire training will primarily take place. The StoryMap can be viewed [here](#) and, because it is publicly accessible, may be shared and distributed beyond the WTREX event.



Screenshot of the opening page of the *Longleaf Pine Habitat in Virginia* StoryMap.

Outreach and Education

On October 2, 2021 Inventory's Zoology Technician, Olivia Latham, presented at the Virginia Master Naturalist Statewide Conference. The virtual presentation discussed Natural Heritage's ongoing project with VMN volunteers to digitize handwritten Watchlist records. These paper records are stored in binders at the

Main Street Center and are in the process of being transcribed by volunteers to be input into Biotics and mapped. This includes about 20 years of records. By digitizing the data of our past surveys we: increase our understanding of population trends, can track when and where species occurred, and share data easier with conservation partners. VMN volunteers have currently transcribed over 200 pages, completing Zoology records and are now in the process of digitizing Botany records. Since the conference, several more volunteers have reached out to Natural Heritage and expressed interest in joining the project.



Original hardcopy Watchlist Logs at DCR-Natural Heritage

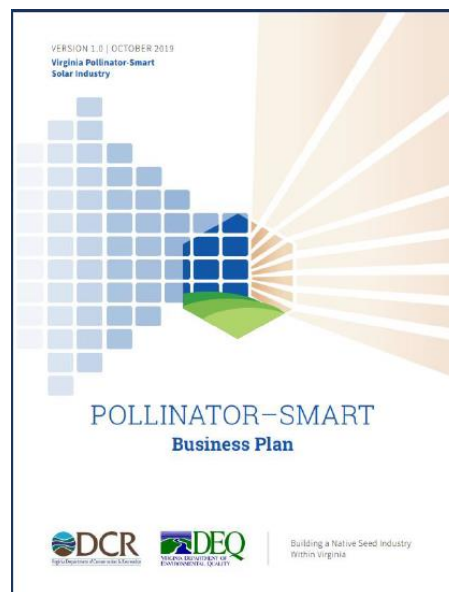
On October 2, 2021, DCR's Natural Heritage Stewardship Biologist Kevin Heffernan helped to lead an online training and live Q&A session for the Virginia Master Naturalists (VMN) Annual Conference. Over 50 participants joined the live Zoom session. Other trainers included Susan MacLaughlin – VMN volunteer; Beth Mizell – Blue Ridge Partnership for Regional Invasive Species Management; and Rachel Carroll – University of Georgia Citizen Science Coordinator. The training video introduced participants to invasive plant issues in Virginia and methods for using online tools for identifying, mapping, and reporting invasive plants. Trainees were provided a list of 20 species for which more information on mode of dispersal is being sought. Over a hundred new reports of invasive plant occurrences have been received and verified since the workshop, with some reports still to be reviewed. Data collected by volunteers will contribute to DCR invasive plant risk assessments.

On October 9, 2021, DCR Northern Region Stewardship staff hosted ecology students from Colonial Forge High School at Crow's Nest Natural Area Preserve to learn about invasive species. The class is currently focused on ecological impacts of invasive species and their control. After an introduction to DCR's Natural Heritage Program and the preserve, the class hiked the Raven access road and a section of the Accokeek Loop Trail, stopping at various locations to discuss the ecological and economic harm caused by invasive species such as Japanese stilt-grass, Tree-of-Heaven and Emerald Ash Borer. Staff discussed the Integrated Pest Management approach for invasive species management and stressed the importance of prevention, early detection and rapid response. Finally, students were introduced to the methods and equipment DCR natural areas stewards use to control invasive species. Approximately 35 students participated in the field trip.



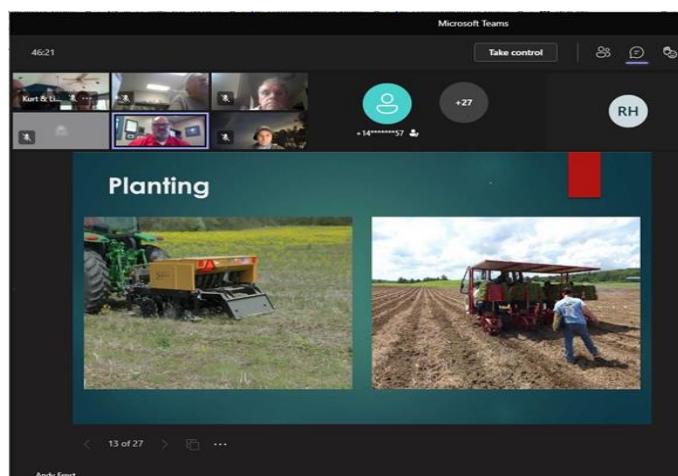
Colonial High School students visited Crow's Nest to learn about invasive species and DCR's methods for controlling them.

On October 13, 2021, DCR staff participated in an engaging first meeting to discuss the development of a native seed industry in Virginia. With Virginia's coming age of renewable energy, there is potential for over 200,000 acres to be identified for solar development in the Commonwealth over the next decade. The benefits of planting native species instead of turf grass for these facilities and other development are numerous including reduced soil and water runoff, the capture of atmospheric carbon, and the establishment of pollinator habitat with increased pollinator services to adjacent agricultural lands and lower maintenance cost. In the eastern United States, two large-scale native seed companies in Kentucky and Pennsylvania provide native species to the Commonwealth. Within Virginia, there is no native seed industry with the exception of some native plant nurseries. According to the [DCR Native Plant Finder](#), there are 278 native species commercially available with only seven Virginia ecotypes. The development of a sustainable native seed industry here in Virginia is vital to the success of the [Virginia Pollinator Smart Program](#).



At the meeting, Andy Ernst of Ernst Conservation Seeds and a pollinator team member presented the [Pollinator Smart Business Plan](#). The plan, modeled after the [Arkansas Native Seed Program](#) and the [Iowa Ecotype Program](#), outlines the development of a grower network producing a few key species and building out the minimum infrastructure needed to deliver product to a facility capable of conditioning the seed to a marketable state. A Virginia Native Seed Growers' Business Advisory Committee will be formed including subcommittees focused on market development, ecotype development, grower development, and grants and financing efforts. Over 40 meeting participants from academia, state and federal agencies, local native plant

growers and non-profits provided information, asked questions and volunteered for the various subcommittees. The passion and energy during the meeting as well as feedback from meeting participants afterwards was inspiring. The first grants and financial group meeting is planned for the end of October.



Andy Ernst presents the Pollinator-Smart Business Plan during the first Virginia Seed Industry Meeting

On October 14, 2021, DCR’s Longleaf Pine Restoration Specialist, Rebecca Wilson led Dr. Chris Gough and his 12 Forest Ecology students from VCU on a whirlwind tour of various sites in southeast Virginia. Field trip stops included Adam’s County Store in Wakefield, VA, The Nature Conservancy’s Piney Grove Preserve, Chub Sandhill Natural Area Preserve, Garland Gray Forestry Center and South Quay Sandhills Natural Area Preserve (SQSNAP). Students heard from resource managers with the Department of Wildlife Resources and were joined at SQSNAP by DCR Southeast Region Steward Darren Loomis. Students were introduced to various resource management techniques, longleaf pine restoration, longleaf cone harvesting and seedling propagation methods, natural resource career discussions, rare species ecology and habitat management, and other natural resource management topics. In addition, students learned about hunt clubs and dog kennels, peanut harvesting, cotton picking, meat curing and other cultural, social and agro-economic nuances of southeast Virginia – “the land of pork, pines and peanuts”.



VCU Forest Ecology class field trip participants learn about longleaf pine seedling production at Garland Gray Forestry Center.

On November 3, 2021, DCR Stewardship Biologist Kevin Heffernan gave a presentation on the Virginia Pollinator-Smart Program to 100+ attendees at the Virginia Association of Wetland Professionals annual

conference, providing an overview of the program and its role in addressing the surge in utility-scale solar site permit applications. With forecasts of over 100,000 acres to be developed for solar in Virginia in the coming decades, Pollinator-Smart began as a partnership between DEQ and DCR to offer an ecologically-, economically- and aesthetically-smart approach to solar site management. The program goal is to use native plant species in order to benefit pollinator and bird species, reduce maintenance costs, sequester carbon, control soil erosion, improve visual appeal, and potentially enhance photovoltaic output by cooling the microclimate of solar sites. Pollinator-Smart is also growing in appeal to other vegetation management sectors such as roadsides, powerline ROW, restoration sites and landscaping projects.



Honeybees utilizing new habitat on the Pollinator-Smart Gold Certified Cople Elementary School Solar Site, Westmoreland County. Photo by Dr. Doug DeBerry, University of William and Mary.

On January 20, 2022, DCR staff participated in a meeting with the Virginia State University (VSU) College of Agriculture Small Farm Outreach Program, Natural Resources Conservation Service (NRCS), the Department of Wildlife Resources (DWR), The Nature Conservancy (TNC) and a small farm owner to discuss a potential pilot program for farmers to participate in the growing of native seeds in Virginia.



Andy Ernst, Pollinator Smart team member, presents an overview of the key elements of commercial-scale native seed production.

The eastern United States currently has only two large-scale native seed companies, located in Kentucky and Pennsylvania, that provide native species to the Commonwealth for restoration and revegetation projects. Within Virginia, there is no native seed industry with the exception of some native plant nurseries. The development of a sustainable native seed industry here in Virginia is vital to the success of the [Virginia Pollinator Smart Program](#) and would result in both environmental and economic benefits for the Commonwealth.

In the first quarter of 2022, several staff from DCR-DNH joined in virtual meetings hosted by NatureServe for the member organizations from northeastern states (ME to VA). A general meeting was held on January 19, 2022 for all participants. Rene' Hypes, DCR-DNH's Environmental Review Coordinator, presented a talk called, 'Virginia Natural Heritage Program Environmental Review-Renewable Energy' to over a hundred participants from different NatureServe network programs and state and federal agencies. Additional breakout sessions were held by discipline (e.g. ecology, zoology, and data management) with the opportunity to discuss and share how different programs handle data and promote conservation.

Virginia Natural Heritage Program

Environmental Review- Renewable Energy



NATURESERVE-NORTHEAST REGIONAL MEETING 1/19/2022

On February 10, 2022, DCR's Northern Regional Supervisor Mike Lott led a field trip, co-sponsored with Stafford County Department of Parks and Recreation, to view migratory waterfowl at Crow's Nest Natural Area Preserve and Aquia Landing Park. At Crow's Nest, participants had great views of tundra swans, northern shoveler ducks, hooded and common mergansers and Wilson's snipe from the canoe/kayak launch boardwalk and along the Accokeek Overlook Trail. Duck species observed at Aquia Landing included gadwall, American widgeon, lesser scaup and canvasback. In addition to seeing an abundance and diversity of waterfowl using high quality Freshwater Tidal Marshes, participants learned about the conservation history of Crow's Nest and the mission of the DCR Natural Heritage Program. Several members of the Fredericksburg Birding Club assisted with the field trip and provided additional viewing scopes for use by the 12 participants in attendance.



Participants viewed a variety of waterfowl including tundra swans within the Freshwater Tidal Marshes of Accokeek Creek at Crow's Nest Natural Area Preserve.

On February 8, 2022, DCR Coastal Region Steward Shannon Alexander was the guest speaker for the [Virginia Certified Ecotour Guide Course](#). She focused on coastal natural communities, presenting physiographical and biological information about habitats across the coastal chronosequence. The course began in the 1990's with the support of the Virginia Coastal Zone Management Zone Program (VCZMP), and since has certified over 60 individuals as ecotour guides. Principles of sustainable tourism, ecology, business management, and information about conservation lands' rules and regulations make the certified guides better interpreters and stewards as they take visitors into Virginia's wild areas.

On February 23, 2022, Shannon helped train participants at an [Eastern Shore of Virginia Master Gardeners](#) course, covering native and invasive plants in the region. Presenting data about invertebrate and bird species declines, and their reliance on specific native plants with which they co-evolved, emphasized the importance of using native Eastern Shore plant species in garden and landscaping projects. Shannon also discussed the [Plant Virginia Natives](#) campaign and distributed copies of the [Eastern Shore Native Plant Guide](#) to all participants.

On March 23, 2022, Shannon presented at the NatureServe Biodiversity Without Boundaries conference in Pittsburgh, PA, summarizing the growth of DCR's state natural area preserve system and focusing on Eastern Shore preserves where a primary stewardship strategy has been restoring habitat for migratory songbirds.

Serving as a guest speaker for these types of events allows DCR natural areas stewards to spread awareness about the Natural Heritage Program and the state natural area preserve system. In doing so, we spread awareness of DCR's conservation mission and hopefully inspire citizens to participate in protecting Virginia's biodiversity.



Recent outreach efforts by DCR's Coastal Region Natural Areas Steward have helped to increase public awareness about the mission of DCR's Natural Heritage Program and the natural area preserve system.

Land Conservation

On March 30, 2022 two DCR-Natural Heritage Program staff presented talks in the "Land Conservation" session at the 32nd annual Environment Virginia Symposium. Environment Virginia is the Commonwealth's premier environmental conference, which brings together environmental professionals throughout Virginia from all sectors: government, non-profits, academia, and industry. The session was well attended and received, and attendees asked thoughtful questions about data inputs and collaborations.

DCR Landscape Ecologist, Kirsten Hazler, presented an introduction to the new Watershed Impact Model, part of the digital conservation planning atlas known as Virginia ConservationVision. The Watershed Impact Model is a screening tool for assessing where activities on the land are expected to have the greatest impact on water (for better or worse). The model relies on multiple data sources representing conditions that drive the terrestrial influence on aquatic systems, including precipitation, geology, soils, topography, and hydrology. In addition to describing model methodology, the talk demonstrated how the model can be incorporated into a prioritization process in which the user supplies importance values within targeted areas of interest, along with the best available land cover.

The Chief of Biodiversity Information and Conservation Tools, Joe Weber, presented updates to ConserveVirginia v3.0--Virginia's Land Conservation Strategy at the ConserveVirginia v3.0, which was codified into law in 2021 (§ 10.1-104.6:1) is the Commonwealth's strategic, quality over quantity land conservation initiative focused on the most important areas to conserve for a variety of values important to citizens. It has become a key tool in guiding state investments to ensure the best conservation outcomes. This data-driven approach to prioritizing land conservation is revised regularly, with Version 3.0 launched in the fall of 2021, and it relies on priorities identified by an array of state and federal agencies, universities, and conservation non-profits. The strategy prioritizes the most important lands from a statewide perspective, focuses limited resources toward those areas, and measures the progress made toward achieving multiple conservation goals.



2022 Environment Virginia Presentation on ConserveVirginia Updates in version 3.0.

Natural Heritage Data Management Totals for FY2021:

Activity 10-1-21 – 3-31-22

New Mapped Locations (EOs) – 37
 Updated Mapped Locations (EOs) - 227
 New Conservation Sites – 7
 Updated Conservation Sites – 65

Total Number in Database 3-31-22:

Animal Mapped Locations (EOs) – 695
 Plant Mapped Locations (EOs) – 1312
 Community Mapped Locations – 614
 Conservation Sites – 685

Managed Areas: (Acres added 10-1-21 – 3-31-22) – 7,049.99 Acres
 Mapped Tracts: (total number in coastal zone) – 4,958 Tracts
 Mapped Managed Areas: (total number in coastal zone) – 3,499 Managed Areas

Healthy Waters

For the grant reporting period, the Environmental Scientist/Analyst with the Virginia Commonwealth University, Rice Rivers Center in the Department of Life Sciences (VCU) continued to serve as the Program Manager of the Virginia Healthy Waters Program (HWP) at the Virginia Department of Conservation and Recreation, Division of Natural Heritage (NHP).

The Healthy Waters Program is supported through funding from several grant sources including the VA CZM Section 306, US EPA Section 319 Nonpoint Source Program, and the Chesapeake Bay Implementation Grant. These sources fund various aspects of the Program including the administration and oversight, Program growth and expansion, improvement in capacity, acquisition and analysis of new data, tool and model development and data integration at the DCR.

Programmatically, the identification of funding, maintenance of models and tools and increasing capacity are the foci of the HWP. Two critical pieces were given significant attention during the reporting period: the

redefinition of Stream Conservation Units (SCUs) to a new polygon, Stream Conservation Catchments (SCC) and the development of on-the-ground capacity for the HWP. Grants were developed to support the continued need for ongoing data development and geographic expansion. Effort outside the Coastal Zone was allocated to expand the base dataset and statewide coverage of the HWP in the southwest region of VA.

Ongoing discussions of the long-term funding for the HWP was undertaken through coordinated communication with DEQ, DCR NHP and VCU. The program leveraged an internal DCR cooperative agreement with the US Department of Agriculture-US Forest Service to develop a proposal and execute field sampling in the Clinch River District. This creative means to build an expanded data set is the result of internal coordination with the Biotics section at NHP and further demonstrates how the HWP crosses most of the sections in the Division. Since the INSTAR data and HWP conclusions are based on data density, an increase in geography and data permits the program to make conclusions of ecological aquatic integrity and identification of ecologically healthy sites. Those data inform the development of Element Occurrences (EOs) and thereby SCUs. The expanded data permit the HWP to have more of a presence outside the Chesapeake Bay and Coastal Zone and be used to better inform the models developed in the NHP. The USDA-USFS was primarily seeking a species list of fish associated with proposed forestry management actions. The proposal indicated a more detailed assessment would be conducted that could include an assessment of ecological integrity. However, due to the limited rainfall in the region, the sites were mostly dry and did not permit sufficient data to be collected to develop an INSTAR model for the region. The assessment did provide the species list and helped inform a new region with the anticipation that the results would lead to further assessments through that cooperative agreement.

The HWP Manager continued to work with the NHP staff to refine the prioritizing of statewide SCUs and the possible redefinition of those areas draining to aquatic and riverine EOs. The proposed approach is based on the NHD+HD catchment areas, instead of a linear buffer as currently employed for SCUs. The process will assist in the repackaging of those polygons the Commonwealth applies for designation of “Healthy Watersheds” as submitted to the CB Program for the CB Program HW Goal. That polygon is consistent with the scale proposed by the Bay Program. The HWP Manager continued to serve as the VA representative on the HW Goal team remaining consistent that the Commonwealth will set their own course for long-term protection action. The staffing of the GIT was supported by the NHP Landscape Ecologist. The HWP Manager attending the Chesapeake Bay Goal Team meetings on 10/21, 12/21, and 2/22. As the Virginia Administration changed, the HWP indicated that a briefing with the new DCR Management and Cabinet was being planned and to determine the direction and level of support for meeting those CB Goals. However, the intent from the Commonwealth is to submit a new shapefile to be considered for revision toward a more manageable target.

The challenge posed by the new polygon (SCU to SCC) is that conservation planning on a watershed basis would be divergent from the opportunistic approach under which some conservation actions are achieved and that the effort for Project Review would significantly change. Project Review at the HWP would see an increase in projects that would be included as part of environmental review for the NHP because the area under consideration would increase. The HWP Manager, staff from the Data Management, Biotics and Project Review discussed the challenges and opportunities. No resolution was reached during the reporting period. However, revised language was proposed for Project Review to consider as a means to address those sites that would be added to their workload.

During the latter portion of the reporting period, the HWP met with management at NHP, VCU and VCZM to discuss the need for programmatic capacity to support on-the-ground implementation of the Program. The diverse funding has supported the program, model development and data development but the program has reached a point to move further. Ongoing data development continues to be a need but a deficiency exists in the ability to influence the outcome of conserving those identified HW sites, including meeting the CB Healthy Waters Goal. The HWP Manager was able to garner support from the NHP Manager to increase field capacity for the Program. By working with the VCZM Director and VCU a concept position was developed and the first

grant proposal was developed to support a HWP Field Coordinator. That position would take those tools created at the NHP and work closely with conservation partners to advance those conservation actions from planning tools into tangible implementation. The position would be supported through resources from VCZM, USEPA Section 319 and Chesapeake Bay Implementation Grant. The HWP Field Coordinator would leverage the application of agricultural or forestry best management practices to meet local TMDL WIP measures in impaired but ecologically healthy waters. The HWP Field Coordinator will likely leverage the work of the eight (8) Coastal Planning District Commissions (PDCs) to assist coastal communities, Conservation Districts, VDOF, Land Trusts, Nature Conservancy and coordinate with other agencies on HWP community-based natural resource identification and protection. During the following reporting period the specifics of the position will be refined and position description developed with the intent to fill such a role in October, 2022.

The HWP Manager continued to meet the request by the Secretary of Natural and Historic Resources to coordinate the development and implementation of an MOU between VA and NC in the APNEP to advance shared watershed priorities and meet the objectives under the 2017 APNEP MOU. The HWP Manager worked closely with the APNEP and provided updates to the Leadership Council on the progress of the 2020 MOU and anticipated MOA. The previous Secretary of Natural and Historic Resources directed the HWP Manager to remain as the Commonwealth's lead on this effort and brief the incoming administration. Coordination with the new administration had begun and the HWP Manager awaited the new appointment of the DCR Director to brief on the effort.

c) DCR – Division of Planning and Recreational Resources

Eastern Shore Rails to Trails Project

During the reporting period, DCR-PRR awarded \$2,500,000 to the Accomack-Northampton County Transportation District Commission to convert 2.3 miles of the abandoned Eastern Shore Railroad right of way and VDOT right of way into a multi-use recreational trail. This project includes Project Engineering/Survey/Design work, three intersection improvements, a traffic signal modification, and the construction of one trail head, one Park & Ride lot, and 2.3 miles of 10' wide paved path.

In early 2022, the Accomack-Northampton Transportation District Commission adopted a resolution creating the Eastern Shore Rail Trail Foundation, a nonprofit corporation charged with heading up planning and design for the trail along around 50 miles of railroad right-of-way running along the spine of the Eastern Shore of Virginia between Cape Charles and Hallwood.

Water Access in the Chesapeake Bay Watershed

During the reporting period, 23 new water access sites were added and reported to the Chesapeake Bay Public Access Working Group under the Chesapeake Bay Agreement, the goal being 300 new water access sites on the Chesapeake Bay by 2025.

5) Department of Wildlife Resources (DWR)

Environmental Services

DWR's Environmental Services Section (ESS) is responsible for reviewing permit applications, policy changes, land use changes, NEPA documents, land development projects, water supply or intake projects and other items to ensure avoidance of impacts upon threatened, endangered, and tiered species; designated wildlife resources; and any of the programs or resources over which we have jurisdiction or our constituents have an interest. DWR's ESS staff work closely with our conservation partners, permitting agencies and others to ensure projects located within the coastal zone are consistent with the Enforceable Policies of the Coastal Zone Program, if necessary, and/or that any permits issued for the work appropriately consider necessary wildlife and habitat protections.

Wetlands

a) Mitigation Banking:

DWR ESS staff continues to participate on the Inter-Agency Review Team that oversees stream and wetland mitigation banking and provide input on new banks all over Virginia, including the coastal zone. Numerous proposals have been made for new banks and/or additions to existing banks within the coastal region of Virginia during this reporting cycle.

b) Wetland Restoration

VDWR continues to have an active voluntary wetland restoration program. The program assists private, state, local, and federal government landowners to restore wetlands on their property. Landowners receive assistance with site selection, cost-share programs, restoration design, and permit issues. The Virginia Department of Wildlife Resources is actively restoring wetland habitats in Virginia. Partnerships with organizations such as The U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program, The U.S. Department of Agriculture's farm bill programs, Ducks Unlimited, The Chesapeake Bay Foundation, and many others have resulted in additional wetland acres restored. VDWR also administers and utilizes funds from the Virginia Migratory Waterfowl Stamp to provide assistance to non-profit organizations for wetland restoration and enhancement activities. These funds are provided from a mandatory stamp required of waterfowl hunters.

At Hog Island Wildlife Management Area, VDWR recently finished a warm season grass and pollinator buffer planting to protect the shoreline from erosion along the James River and to reduce agricultural and sediment runoff. VDWR currently has several large wetland restoration projects submitted for grant funding. In partnership with Ducks Unlimited, VDWR is trying to utilize the NFWF Small Watershed Grant to replace several outdated water control structures, repair dike damage, and clear trees at VDWR's Doe Creek Wildlife Management Area. VDWR is also working with the US Fish and Wildlife Service to submit a NFWF National Coastal Resilience Fund grant to repair a failed weir and restore hydrology to approximately 700 acres of coastal freshwater wetland. VDWR is working with the Upper Mattaponi Indian Tribe on another Small Watershed Grant to restore recently reacquired property suffering from substantial stream and wetland degradation from historic land use.

Aquatic Wildlife Resources

Tidal Rivers Program:

- VDWR conducted fall community sampling in the James, Chickahominy, Rappahannock, Pamunkey, Mattaponi, and Piankatank Rivers via boat electrofishing from October to November 2021. All fish were weighed and measured; otoliths were collected from a subsample of Largemouth Bass. A total of 270 otoliths were collected from Largemouth Bass across all tidal rivers: James (90), Chickahominy (133), Mattaponi (8), Pamunkey (14), Rappahannock (25), Piankatank (0). Otoliths will provide baseline age

and growth data for Largemouth Bass in the face of the Alabama Bass invasion in the James and Chickahominy River systems, as well as valuable information on population structure in all tidal waters.

- VDWR Fisheries staff conducted five days of fall electrofishing surveys of the tidal Rappahannock River from October 5th – 8th, and October 12th, 2021. Sampling efforts were located along 18 randomly selected sites to get a broad spectrum assessment of the current fishery. The fall survey yielded a wide diversity, with 41 fish species detected. The survey yielded the collection of 2,968 fish, with White Perch contributing to 23% of the total catch.
- VDWR Fisheries staff conducted full community electrofishing surveys of the upper Piankatank River on October 13th and 20th, 2021. Nine shoreline sites were sampled to provide a detailed assessment of the current fishery. DWR staff was able to assist VIMS staff with the collection of Northern Snakehead for their telemetry study detailing the movements of tagged Bowfin and Northern Snakehead.
- VDWR Fisheries staff conducted two days of sampling on the tidal Rappahannock River. Electrofishing surveys were conducted on March 1st and 3rd, 2022 on the tributaries of Mount Landing, Occupacia, Totuskey, and Piscataway Creeks. Species selective runs were conducted with the primary focus on the collection of Yellow Perch, Largemouth Bass, Northern Snakehead, and Bowfin.
- VDWR conducted low-frequency electrofishing surveys in the James River to collect Blue Catfish for a movement ecology project. Surveys were conducted across four days in late-September (September 29th and September 30th, 2021) and early-October (October 1st and October 4th, 2021). A total of 40 Blue Catfish were collected with 13 Blue Catfish collected in October. Blue Catfish were anesthetized and had acoustic tags surgically implanted in their body cavity so their movement throughout the James River system could be tracked via telemetry arrays.
- VDWR conducted active tracking of Blue Catfish and Atlantic sturgeon throughout the James and Chickahominy Rivers from October 2021 to March 2022.

Back Bay and associated tributaries:

- Back Bay- Fisheries community sampling by boat electrofishing during September through November of 2021, as well as genetic sampling for hatchery-origin Largemouth Bass. Water quality for general water quality parameters on each sampling day.
- North Landing River- Fisheries community sampling by boat electrofishing during October 2021, Water quality for general water quality parameters on each sampling day.
- Northwest River- Fisheries community sampling by boat electrofishing during October 2021, Genetic sampling for hatchery -origin Largemouth Bass. Water quality for general water quality parameters on each sampling day. Alosine sampling via boat electrofishing during March of 2022. Adult Alewife and Blueback Herring collected on the spawning grounds located above the Rt. 168 bridge.
- Monthly water quality monitoring at vegetation restoration site in Back Bay, measuring variables around a turbidity curtain installed to provide wave action respite for vegetation establishment.

Fish Passage Program

1. Stream Monitoring, Adult Anadromous Fishes

a. Chesapeake Tributaries: Weekly boat electrofishing for adult anadromous fish began in mid-February (2022) on the James River in the upper tidal reach and on the tidal Chickahominy River below Walkers Dam. Sampling on the Rappahannock began in early March on the upper tidal reach. Once targeted anadromous species showed up, sampling expanded to upstream reaches. This includes sampling below Boshers Dam on the James, in the upper reaches of Chickahominy Lake and five miles upstream of Fredericksburg on the Rappahannock. The first alosine found on the James was an American Shad but their numbers have been very low in the tidal and fall zone reaches so far this spring. Alewife and Hickory Shad were the most abundant alosines in the upper tidal James and upper tidal Rappahannock through March. Alewife numbers were typical

below Walkers Dam, in periodic fishway trapping and in the upper lake through March. Blueback Herring first arrived at Walkers Dam in late March. A few American Shad and Hickory Shad made it into electrofishing samples below Walkers Dam in March. Off and on unseasonably cold spells slowed down the alosine runs during March.

VDWR is also sampling (backpack and boat electrofishing) for river herring on a few selected tributaries of the James downstream of Richmond as part of the effort to prioritize fish passage needs at road stream crossings. For example, Cornelius Creek was sampled by boat (lower tidal end) and by backpack (beginning of non-tidal section) in March. Alewife were found all the way up to the tidal/non-tidal interface, which is only 0.6 miles downstream of a road stream crossing barrier at Mill Road in Henrico County.

b. *Boshers Dam Fishway (James River)*: The vertical slot fishway went into operation for the season in early March 2022. By the end of March, resident species such as Quillback and Shorthead Redhorse (both in the sucker family) were observed passing through the fishway. American Shad, although usually few in number, start to pass in April. This year DWR teamed up with the City of Richmond (dam owner) to offer livestream Shad Cam for the first time (launched March 31, 2022). Previously, Shad Cam was provided as still images that refreshed every five seconds. At least 30 species of fish use the fishway annually. These include American Shad, Gizzard Shad, and the anadromous Sea Lamprey that are native to the James. American Eel elvers also take advantage of the fishway when migrating inland to their grow out habitat. Digital video will be reviewed post-season to generate run count estimates by species.

c. *Walkers Dam Fishway (Chickahominy River)*: This double Denil fishway remains open to passage throughout the year. We installed the electronic counting equipment mid-February to begin data collection for the 2022-anadromous spawning run. With the absence of commercial and recreational harvest numbers, this type of run count is critical to evaluating the overall health of herring populations. Through March, Alewife dominated most of the alosine passage. An update on the 2021 and past year results is as follows:

- 2021: Gizzard Shad=79,842; Blueback Herring=65,103; Alewife=13,740; Other species, including a few American Shad, Bluegill, Yellow Perch, etc.=7,739.
- Total annual passage estimates to date:
 - 2018=487,470 (182,628 river herring)
 - 2019=250,393 (85,960 river herring)
 - 2020=255,460 (100,509 river herring)
 - 2021=166,424 (78,843 river herring)
 - Gizzard Shad average about 59% of the total count annually

2. Fish Passage Projects

a. *Road Stream Crossing Fish Passage*: The DWR is working with partners (U.S. Fish and Wildlife Service, Virginia Commonwealth University, and James River Association) to prioritize fish passage projects at road stream crossings in tidal James tributaries as part of the Hampton Roads Bridge Tunnel expansion mitigation effort. DWR staff were part of the team of partners that spent several days in November and December conducting crossing assessments using the NAACC (North Atlantic Aquatic Connectivity Collaborative) protocol. Several staff also received training during these assessments in order to expand the number of staff that will be able to lead additional crossing assessments in Virginia.

During this reporting period, the DWR continued to work with the JRA, VDOT and USFWS to plan for the removal of a road crossing on Flowerdew Hundred Creek (James tributary to the tidal James). This crossing scored as a moderate barrier to passage using the NAACC protocol. The plan is to remove the crossing and restore the stream since VDOT is able to abandon this gravel road.

b. Rapidan Mill Dam Removal: The DWR is continuing to work with The Center for Natural Capital/Rapidan Mill Institute to plan for the removal of Rapidan Mill Dam on the Rapidan River. Now that Embrey Dam is gone from the Rappahannock, Rapidan Mill Dam is the next upstream barrier to migratory fishes.

NonGame Species Monitoring and Research

- a. *Maintenance of Alternative Seabird Nesting Habitat for the Displaced Hampton Roads Bridge –Tunnel Seabird Colony:* On February 14, 2020, Governor Northam directed the DWR to provide temporary alternative nesting habitat for seabirds displaced by the Hampton Roads Bridge and Tunnel (HRBT) Expansion Project through the construction period (~2025). In 2020, DWR staff obtained the necessary permits and hired contractors to transform the parade grounds of Ft. Wool, an island adjacent to the HRBT, into suitable seabird nesting habitat. At the same time, Wildlife Division staff obtained permits to lease and moor a sufficient number of flat-top barges in the embayment between the HRBT and Ft. Wool to create additional nesting habitat. The department acquired decoys and audio lures to help attract target species, and engaged the Virginia Tech Shorebird Program Team (VT Team) to install and maintain the seabird attraction equipment along with remote monitoring cameras. They also evaluated nesting success on Ft. Wool and the barges through regular nest and adult counts, adult and chick banding, and weekly resighting surveys of banded individuals to obtain breeding population and chick survival estimates and to gain information on post-breeding movement patterns. In 2021, DWR staff prepared Ft. Wool and acquired three large barges that, combined, yielded approximately 2.5 acres of suitable habitat. The department also contracted with the VT Team for a second year of bird monitoring on Ft. Wool and the barges. The table below presents final results from the 2020 and 2021 breeding seasons. The number of birds nesting on Ft. Wool and the barges and the number of young banded in 2021 increased for all species except laughing gulls, for which no 2021 breeding population estimate was derived.

Final estimated number of adults breeding and number of young banded on Ft. Wool and barges, by species in 2020 and 2021.

Species	No. of breeding adults in 2020	No. of breeding adults in 2021	No. of young banded in 2020	No. of young banded in 2021
Royal terns	10,542	11,462	2,110	3,278
Sandwich terns	236	272	52	77
Common terns	828	1,326	550	687
Black skimmers	142	278	102	149
Gull-billed terns	2	30	2	29
Laughing gulls	830	ND	32	58
Totals	12,580 (11,750)¹	13,368	2,848	4,278

¹Number in parentheses does not include 2020 laughing gull total.

During this reporting period, department staff continued to engage in a variety of outreach efforts that included regular blog updates on the Ft. Wool/barges seabird project, presentations to bird clubs and Master Naturalist groups, and newspaper interviews. Moreover, staff installed additional erosion and sediment control coir logs on Ft. Wool in areas that experienced significant overwash, applied herbicide on the parade grounds, and installed low grade ramps in concrete pits and wells so chicks can escape should they fall in the cavities. The DWR has renewed its contract with USDA Wildlife Services to continue rat control and management of avian predators. Lastly, the Department received its 2022 VMRC permit to anchor three large barges in the Ft. Wool embayment and successfully leased three barges from the same vendor who will prepare, transport and anchor them in place in early April. During the pre-season preparations, the Department discovered over 40 brown pelican nest structures on Ft. Wool under and around the small snowy egret colony. This is the first record of pelican nesting activity on Ft. Wool.

Atlantic Slope Freshwater Mussel Propagation

The Virginia Department of Wildlife Resources continues its cooperative Atlantic Slope freshwater mussel propagation facility with the U.S. Fish & Wildlife Service's Harrison Lake National Fish Hatchery (HLNFH) in Charles City, marking the 15th year of production and 16th year of operation at the Virginia Fisheries and Aquatic Wildlife Center (VFAWC). Propagation for the 2022 season began with collection of freshwater mussel broodstock in October 2021. Thus far, we have collected 52 individuals of five species from four rivers (Table 1).

Our target production goal for 2022 is 898,500 juvenile mussels across 14 species with grow out and release of approximately 16K mussels. Most of the species targeted for propagation in 2022 are not listed as threatened or endangered, but are listed either as a species of greatest conservation need in Virginia's Wildlife Action Plan, species of concern by the USFWS, or are being produced as part of Natural Resource Damage Assessment and Restoration settlements. Work with federal and state endangered James Spiny mussel (*Parvaspina collina*) continues for the 8th year and we are again focusing efforts on the state-endangered Brook Floater and the state-threatened and federally petitioned Green Floater. This year, VDWR is continuing *in vitro* work at Virginia Commonwealth University's Rice Rivers Center with several Tennessee drainage species: Dromedary Pearlmussel (*Dromus dromas*), Pheasantshell (*Actinonaias pectorosa*), and Fanshell (*Cyprogenia stegaria*). Following metamorphosis, the juveniles of these species will be returned to DWR's Aquatic Wildlife Conservation Center (AWCC) for culture and grow out.

VFAWC staff, USFWS personnel, and DWR staff began collections for the 2022 propagation season in October of 2021 in the Nottoway River with three species: Alewife Floater (*Utterbackiana implicata*), Tidewater Mucket (*Atlanticoncha ochracea*), and Yellow Lampmussel (*Lampsilis cariosa*). Two species (Brook Floater, *Alasmodonta varicosa*; Green Floater, *Lasmigona subviridis*) were collected from the Cacapon River and Back Creek in West Virginia in March (Morgan and Berkeley Counties). Alewife Floater (*U. implicata*) were also collected from the Rappahannock River in March. VDWR's partners with the Anacostia Watershed Society collected Alewife Floater (*U. implicata*) from the Anacostia River, Washington D.C. in March. Staff at the coordinating DWR facility, AWCC near Marion, Virginia, collected three species for use via *in vitro* propagation: Dromedary Pearlmussel, *Dromus dromas*; Pheasantshell, *Actinonaias pectorosa*, and Fanshell, *Cyprogenia stegaria*. All broodstock collection counties are in the state of Virginia unless stated otherwise. All broodstock collected in October of 2021 overwintered at HLNFH in floating mussel baskets on ponds.

The 2022 propagation season began with *in vitro* mussel propagation. VDWR has completed three series of *in vitro* trials, using 15 broodstock mussels among three species: Dromedary Pearlmussel, Pheasantshell, and Fanshell. VDWR is currently monitoring 4 Green Floater for the spontaneous release of metamorphosed juveniles from the aforementioned drainages.

VDWR is currently holding considerable numbers of mussels propagated between 2019 and 2021: more than 3,800 James Spiny mussel, more than 4,600 Green Floater, and more than 2,600 Brook Floater. In October and November of 2021, we released 2,503 mussels of five species, including 521 Brook Floater (Table 2). VDWR also delivered 7,972 mussels of five species to partnering organizations within this reporting period.

Table 1. Planned and completed broodstock collections for the 2022 propagation season.

Species	Waterbody	Number Collected	Date Collected	Propagation Goal
<i>Actinonaias pectorosa</i> ¹	Clinch River	-	-	200,000
<i>Alasmidonta varicosa</i>	Cacapon River	15	3/21/2022	15,000
<i>Atlanticoncha ochracea</i>	Nottoway River	8	10/26/2021	-
<i>Cyprogenia stegaria</i> ¹²	Clinch River	-	-	-
<i>Dromus dromas</i> ¹²	Clinch River	-	-	-
<i>Elliptio complanata</i> ¹	Broad Run, Bull Run, Cacapon, Potomac	-	-	13,000
<i>Elliptio fisheriana</i> ¹²	Broad Run, Bull Run	-	-	-
<i>Fusconaia masoni</i> ¹	Dan River	-	-	500
<i>Lampsilis cardium</i>	Potomac	-	-	100,000
<i>Lampsilis cariosa</i>	Nottoway River	1	10/26/2021	-
<i>Lasmigona subviridis</i>	Rappahannock River	0	-	20,000
	Back Creek, Cacapon River	4	3/21/2022	30,000
<i>Parvaspina collina</i>	Mill Creek	-	-	10,000
<i>Pyganodon cataracta</i>	Potomac, Anacostia Rivers	-	-	10,000
<i>Utterbackiana implicata</i>	Rappahannock River	14	3/15/2022	200,000
	Nottoway River	10	10/26/2021	300,000

¹Propagation either partially or completely using *in vitro* methods

²Propagation in small numbers for research into improved methods

Table 2. VFAWC freshwater mussel releases October 2021 through April 2022.

Species	Date	Number Released	Broodstock Stream	Release Stream	Mean Length (mm)	Age Class
<i>Alasmodonta varicosa</i>	10/12/2021	76	Cacapon	South River	36	1+
	10/12/2021	76	Cacapon	South River	34.6	1+
	10/13/2021	75	Cacapon	SF Shenandoah	32.9	1+
	10/13/2021	75	Cacapon	SF Shenandoah	36.1	1+
<i>Parvaspina collina</i>	10/22/2021	274	Johns Creek	Craig Creek	28.4	2+
	11/1/2021	219	Johns Creek	Pedlar River	28.3	2+
<i>Lampsilis cariosa</i>	10/12/2021	369	Nottoway	South River	30.9	2+
	10/12/2021	288	Nottoway	South River	34.0	2+
<i>Strophitus undulatus</i>	10/12/2021	166	Cacapon	South River	36.5	1+
	10/13/2021	190	Cacapon	SF Shenandoah	34.8	1+
	10/13/2021	174	Cacapon	SF Shenandoah	37.1	1+
	10/12/2021	172	South River	South River	35.8	3+
<i>Alasmodonta undulata</i>	10/13/2021	220	South River	SF Shenandoah	39.9	2+
	10/13/2021	129	South River	SF Shenandoah	25.6	1+/2+

SECTION B.3 FEDERAL CONSISTENCY

During the period of October 1, 2021 and March 31, 2022, the Office of Environmental Impact Review/Federal Consistency (OEIR) reviewed 80 development projects for consistency with the Virginia Coastal Zone Management Program (VCP). This represents 63% of the total amount of projects reviewed (126) during this period. Major state projects accounted for 26 projects, 11 were State Corporation Commission reviews, 9 were National Environmental Policy Act (NEPA) documents without a federal consistency component, 43 were federal actions, and 34 were federally funded projects to state or local governments. The 43 federal actions included 24 federal agency activities, 19 federal licenses and approvals, and 0 outer continental shelf projects. The 24 federal agency activities included 7 projects submitted under the residual category pursuant to the federal consistency regulation (15 CFR 930.31(c)), which consisted of federal funding to private citizens such as U. S. Department of Housing and Urban Development (HUD) mortgage insurance projects. All federal consistency determinations and federal consistency certifications were completed within the established legal deadlines.

In early March 2022, Todd Janeski (under a separate grant task) sent a draft Geographic Location Description (GLD) to NOAA for review and consideration. David Kaiser with NOAA responded in an email that the GLD, if approved, would be the largest of any state. They stated that the proposed GLD extended too far north and too far out, even extending beyond the continental slope in some areas. They were also concerned that the approval

of such a large GLD would call into question "reasonableness to the states' use of federal consistency in not trying to reach too far geographically." OEIR has been reviewing the approved listed activities of other states in preparation to resubmit our listed activities, however, since the listed activities and GLD effects justification are so tied and NOAA stated that they are very backed up with GLD approvals, no additional actions have been taken.

The OEIR continues to provide informal training on federal consistency requirements to consultants who prepare consistency documents for federal agencies and applicants for federal permits and maintains a website for Federal Consistency Reviews which can be accessed through DEQ's main webpage or found at <https://www.deq.virginia.gov/permits-regulations/environmental-impact-review/federal-consistency> The OEIR webpage is updated weekly.

Table 1 depicts federal projects in Tidewater Virginia reviewed from 10/1/21 to 3/31/22.

TYPE OF FEDERAL PROJECTS REVIEWED*	NUMBER OF PROJECTS COMPLETED	REVIEW PERIOD
*Direct Federal Actions	24	30-60 Days
** Federal Activities (approvals & permits)	19	90 Days
***Federally Funded Projects	34	30 Days
Outer Continental Shelf	0	45-60 Days
TOTAL	80	30-90 DAYS

*Includes seven FCDs reviewed under the residual category of Subpart C of the Regulations. (eg. HUD Mortgage Insurance and USDA Rural Development funding).

**These are projects reviewed under Subpart D of the Regulations. These projects include individual permits issued pursuant to Section 404 of the Clean Water Act administered by the U.S. Army Corps of Engineers.

*** These include federal assistance to state and local government reviewed under Subpart F.

FEDERAL PROJECTS REVIEWED FOR CONSISTENCY WITH THE CZMP from 10/1/21 to 3/31/22

I. Federal Agency Projects

The following projects are examples of federal agency projects subject to Subpart C of 15 CFR 930.33(a).

Embassy Suites Improvement Project, Va. Beach Hurricane Protection Project - The U.S. Army Corps of Engineers (Corps) submitted a FCD for the Embassy Suites Improvements Project because it is located within the project limits of the Virginia Beach Hurricane Protection Project (VBHPP). The proposed project is located in the City of Virginia Beach, immediately landward of the VBHPP seawall between 41st Street and 42nd Street. Gold Key Professional Hospitality Resource is proposing at-grade hardscape and landscape improvements to the Embassy Suites patio within the 25-foot drainage and seawall easement. The proposed improvements include hardscape and landscape features that would encroach on 3,250 square feet of the easement area and along 130 feet of the Embassy Suites structure. The proposed hardscape improvements

would include installation and construction of aluminum picket fencing, paver areas, wood decks, and concrete sidewalks. The landscape improvements would include planting a combination of ornamental grasses, ground cover, and small bushes.

Reissuance of 41 Nationwide Permits - DEQ concluded a limited review of the 41 NWP's with our state agency partners in response to the Corps' supplemental coordination under 15 CFR 930.46. Reviewers had no additional comments beyond those previously provided in DEQ's December 17, 2020 conditional concurrence. Accordingly, the 2020 conditional concurrence is DEQ's final decision on the matter.

Dolphin Wahoo Amendment 10 - The National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) intends to promulgate a new rule to implement Amendment 10 to the Fishery Management Plan for the Dolphin and Wahoo Fishery of the Atlantic (Dolphin Wahoo Amendment 10). The proposed amendment would revise the catch levels, allocations, accountability measures, and management measures for dolphin and wahoo. Management measures would address authorized gear and the operator card requirement in the dolphin and wahoo fishery, as well as the recreational vessel limit for dolphin. The purpose of the amendment is to base conservation and management measures on the best scientific information available and increase net benefits to the nation.

Virginia NERR Management Plan - The National Oceanic and Atmospheric Administration (NOAA) submitted a negative determination for a proposed revision of the management plan for the Chesapeake Bay Virginia National Estuarine Research Reserve. Plan revisions are required at least every five years. This revised plan is intended to replace the plan approved in 2008. The draft revised management plan outlines the reserve's: strategic goals and objectives; administrative structure; programs for conducting research and monitoring, education, and training; resource protection, restoration, and manipulation plans; public access and visitor use plans; consideration for future land acquisition; and facility development to support reserve operations. NOAA states that the approval of the revised plan would have no coastal effects as there are no substantive changes between the actions and priorities included in this plan and the previous management plan.

II. Residual Category

The following are examples of consistency determinations submitted as a residual category of Subpart C pursuant to the federal consistency regulation 15 CFR 930.31(c).

7581 Richmond Road - SCS Engineers, on behalf of S.L. Nusbaum Realty Company (the applicant), submitted a FCD, for the proposed construction of an apartment complex, called Oakland Pointe Apartments, at 7581 Richmond Road in James City County. The proposed project would consist of constructing four three-story multi-residential buildings and a clubhouse. The proposed project site consists of an unoccupied residence, open space, two barns and trees. An unnamed tributary of Yarmouth Creek is present on the eastern site boundary. The applicant is applying to the U.S. Department of Housing and Urban Development under the Section 221(D)(4) mortgage insurance program. Therefore, a FCD was submitted to DEQ.

Stuart Garden Apartments - HUD proposes to provide mortgage insurance to Vitus Group (applicant) for the refinancing of the Stuart Gardens Apartments located at 1326C Garden Drive in the City of Newport News under its Section 232/223(f) Program. The project is being financed through Virginia Housing. The Section 232/223(f) Program insures mortgage loans to facilitate the purchase or refinancing with or without repairs of existing facilities that do not require substantial rehabilitation. The development consists of 109 residential buildings comprising 491 residential units. The buildings were constructed in 1940 and renovated in 1980. In addition to the residential buildings, there is a leasing office/community building, playground, an open air pavilion, parking and landscaped areas on the property. The federal action is for refinancing only with no new construction or ground disturbance proposed. HUD has submitted a Federal Consistency Determination that

finds the proposed action consistent to the maximum extent practicable with the enforceable policies of the Virginia Coastal Zone Management Program.

III. Federal Activities (Permits, Licenses and Approval)

These projects are examples of federal consistency certifications reviewed pursuant to Subpart D of the Consistency Regulations (15 CFR §930.53):

Courthouse Landing Mixed-Use Development – 29:11 Chesterfield (applicant) is applying for an individual permit from the U.S. Army Corps of Engineers (Corps) pursuant to Sections 401 and 404 of the Clean Water Act for impacts associated with the proposed Courthouse Landing Mixed Used Development (MUD) in Chesterfield County. The proposed 123-acre MUD will provide a live, work, and play community. The project site is an irregularly shaped tract of currently undeveloped and forested land, comprised of three parcels of land (GPINs: 7696679512, 7696669041 and 7716663550) in the southeast quadrant of the intersection of Route 288 and State Route 10 (Iron Bridge Road). The development site was chosen because of its ability to support the Chesterfield County Government Complex, the Chesterfield County Regional Airport, the airport industrial complex, multiple schools, and administrative offices. The MUD will include multi-family residential townhouse and apartments (300 multi-family-units, 97 townhomes and 198 condominium units), commercial development, professional offices, retail shopping, a 120-room hotel and a regional hospital. The development will also include a gas station, three banks, five restaurants, a national daycare, and 10,000 to 15,000 square feet of professional office space for Chesterfield County. The applicant certifies that the project is consistent with the enforceable policies of the Virginia Coastal Zone Management Program.

Columbia Gas Transmission, LLC TCO Align RNG Owens Grove Meter Station - Columbia Gas Transmission, LLC (Columbia or applicant) is seeking approval from the Federal Energy Regulatory Commission (FERC) to conduct the TCO Align RNG Owens Grove Meter Station Project, a FERC Blanket Automatic Authority Project (VA21-054). The project is located in Surry County, Virginia and involves the installation of bi-directional piping for a point of delivery (POD) and point of receipt (POR) meter station being constructed by Align RNG. At the request of customer (Align RNG), Columbia proposes to establish the bidirectional Owens Grove Meter Station for receipt of up to 2.4 MMcf/d, with buyback capability (delivery) of up to 0.288 MMcf/d, by installing a bi-directional 2-inch tap on Line VM 107. Columbia activities will include hydrovac excavation, tapping the VM 107 12-inch mainline, grading a new tap site pad and installing piping to the new meter station being built by Align RNG. Columbia will install the new piping to edge of their right-of-way and will not disturb any land beyond the limits of their existing right-of-way. Columbia will access their right-of-way via an access road to be built by Align RNG. Columbia will utilize a 55-foot wide, variable length workspace within the existing right-of-way for installation of the proposed tap site and interconnect piping. Approximately 0.46-acre of land disturbance will occur for the project. All land disturbance will be limited to previously disturbed areas associated with initial pipeline installation and subsequent maintenance. The applicant certifies that the project is consistent with the enforceable policies of the Virginia Coastal Zone Management Program.

Cavalier Solar Facility - The Cavalier Solar A, LLC (the applicant) submitted a FCC for the construction of an electrical collector system, solar panel arrays, stormwater improvements and permanent access roads through a solar facility in Surry and Isle of Wight counties. The project qualifies for an individual permit from the U.S. Army Corps of Engineers due to proposed wetland impacts. Therefore, the applicant submitted a FCC for review. Additionally, the project will provide vehicle access for essential operations and required maintenance of the 240 megawatts of AC power (MWac) solar generation facility. Approximately 19.7 acres of wetlands are proposed to be impacted. DEQ also reviewed this project under DEQ 20-141S for the State Corporation Commission.

Middle Peninsula Regional Airport Box Hangars and Access Road Construction - The Middle Peninsula Regional Airport Authority (applicant) proposes to construct box hangars and an access road at the Middle

Peninsula Regional Airport (FYJ) near the Town of West Point in King and Queen County, Virginia. The proposed project area consists of an existing 4.23-acre grass field that is regularly mowed. Also located in the project area is an existing gravel road that will be removed along with a line of existing trees on the northern edge of the area. The project area has been extensively disturbed during previous airport construction projects. The proposed project includes the construction of nine 45-foot x 50-foot box hangars and associated access road. The hangars will be grouped into a set of 4 hangars and a separate set of 5 hangars. The hangars will be used to store small aircraft based at FYJ. A 20-foot-wide asphalt access road will also be constructed in addition to vehicle parking lots and asphalt aprons in front of the hangars connecting them with the existing parallel taxiway. Construction is planned to start in calendar year 2022 and will require approximately 280 calendar days to complete.

IV. Outer Continental Shelf Activities

No projects were reviewed during the time period of this report for this category.

V. Federal Funds

The following are examples of consistency determinations submitted as Subpart F pursuant to the federal consistency regulation 15 CFR 930.90:

2710 Oak Avenue Bath Repairs - The Newport News Redevelopment and Housing Authority (NNRHA) proposes to use Community Development Block Grant (CDBG) funding from the U.S. Department of Housing and Urban Development (HUD) for the removal of an existing tub/shower unit with a 4" curb shower unit replacement, and the installation of a new chair stair lift to existing stairway for access to second floor bathroom.

1021 Prudence Road House Demo & Construction - The City of Suffolk proposes to use Community Development Block Grant (CDBG) funding from the U.S. Department of Housing and Urban Development (HUD) to demolish an existing 1940s, 1,200 square foot, two bedroom single-family home located at 1021 Prudence Road in the City of Suffolk. The City will then construct a new single-family home with the same footprint to serve victims of domestic violence.

Town of Montross Farmers Market - The Town of Montross is applying for a grant from the U.S. Department of Agriculture to cover part of the cost of creating a farmers market in the Courthouse Business District of the Town of Montross.

Marsh St. Pump Station Improvements - The Town of Tappahannock is in the process of receiving funding through the United States Department of Agriculture (USDA) Rural Development Loan and Grant program (CFDA 10.760) for the Marsh Street Pump Station Improvements Project.

SECTION B.4 PROGRAM CHANGES

During the reporting period (October 1, 2021 through April 30, 2022), Virginia worked to get the important fishing areas Geographic Location Description (GLD) approved by NOAA. On March 4, 2022, the draft GLD was submitted to NOAA for review and consideration. NOAA's David Kaiser responded in an email that the GLD, if approved, would be the largest of any state. He stated that the proposed GLD extended too far north and too far east, even extending beyond the continental slope in some areas. He was also concerned that the approval of such a large GLD would call into question "reasonableness to the states' use of federal consistency in not trying to reach too far geographically." Virginia continues to review the approved listed activities of other states in preparation to resubmit Virginia listed activities, however, since the listed activities and GLD effects justification are interrelated and NOAA stated that they are very backed up with GLD approvals, no additional actions have been taken.